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APPERCEPTION

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A monograph
A Monograph

ON

PSYCHOLOGY AND PEDAGOGY

BY

DR. KARL LANGE

DIRECTOR OF THE HIGHER BURGHER-SCHOOL, FLAUN, GER.

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TRANSLATED AND PRESENTED TO AMERICAN TEACHERS BY THE
FOLLOWING-NAMED MEMBERS OF THE HERBERT CLUB :

ELMER E. BROWN, CHARLES DE GARMO, MRS. EUDORA HAILMANN,
FLORENCE HALL, GEORGE F. JAMES, L. R. KLEMM, OSSIAN
H. LANG, HERMAN T. LUKENS, CHARLES P. MC MURRY,
FRANK MC MURRY, THEO. B. NOSS, LEVI L.
SEELEY, MARGARET K. SMITH.

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CHARLES DE GARMO



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EDITOR'S PREFACE.

IF we inquire into the genesis of our present educational ideals, we shall find that they take their rise in the hearts of a few great men. Comenius, Rousseau, and Pestalozzi, to whom much that is excellent in our American schools to-day can be traced, were men who wrote and taught because they saw a great need, because their intense emotional natures were stirred to the depths at the sight of children growing up in ignorance or wasting the precious time of youth in empty verbalism. Like all great reformers, they were governed more by their feelings and instincts than by the scientific spirit, which analyzes everything, never taking a step not warranted by logical deduction. Logic is too cold and slow for a man whose heart is on fire with some plan for the regeneration of society. The initial impulses of our educational advance have been given by men of this type. Usually they have cared but little, even in the later years of their activity, for putting their ideas into scientific form. Where they have done so, however, it is evident that they have merely adopted the primitive psychological conceptions current among the people. Early attempts to reduce these psychological notions to a system led to the theory of disparate or independent "faculties," out of which at a later

period phrenology naturally grew. Antiquated as these crude psychological notions may seem to us, they have nevertheless left a deep, persistent impression upon our whole system of educational ideas. They are doubtless responsible for our faith in what we call formal culture, or discipline of the mind, through studies largely lacking in knowledge content; to them must be ascribed the distinction between *forming* and *informing* studies; also the attempts to train these so-called "faculties," like perception, memory, imagination, reason, will, by means of specific subject-matter and methods of instruction. Doubtless even so primitive a system has done good service, for any psychology of education is better than none.

But it now seems evident that if we are to make further progress in education we must add to this initial impulse (for which the world can never be too grateful) something of the scientific spirit of the age in which we live. A number of facts point to this conclusion. In the first place, the curriculum of studies is no longer the simple thing it was in Pestalozzi's time. Study after study has been added in obedience to some popular demand or because of the esoteric interest of the schoolmaster. What now constitutes our curriculum is a chaos of isolated subjects, which are allowed, not from any demonstrated psychological need, but because of some popular or professional demand. The only proper way to determine which shall be eliminated, which abridged, is to submit the whole to a thorough investigation according to the well developed psychology of

the present time, since the primitive systems are wholly inadequate to the task. Such an investigation will necessarily take into consideration the educational value of each subject, when it has received the best possible coördination with other branches; it will consider the natural interests of the child, his power of comprehension, the effect of his present acquirements, disposition and leading purposes upon his acquisition of new knowledge, for all of these things will help to decide how the curriculum shall be made up. This is a problem not to be solved by efforts aroused merely by emotion or instinct, for the problem is essentially scientific in its nature.

We meet this same need for the scientific application of psychology to education in another direction. As long as only the well-to-do classes were educated, there were many influences to which we could appeal to obtain the desired results. Were the child inclined to evade our instruction in order to follow his own devices, we might appeal to his ambition, to emulation, to pride, to shame, to regard for the reputation of family, and the like; but when the streets, the mines, the factories, the tenement districts, send their children to school, these indirect means of securing attention to study are mostly futile. We stand face to face with naked ignorance and indifference, and must make our impression in a few short years or suffer defeat. We can no longer rely on indirect means for arousing the mind to educational effort, but must contrive to awaken a deep, permanent and growing interest in the acquisition and posses-

sion of knowledge itself. This is a psychological problem involving the child's acquirements, his natural instincts and interests, the content of the studies, together with an investigation into the time, order, and manner of presenting them. It appears self-evident, therefore, that to the primal inspiration for the uplifting of humanity, we must now add the intelligent direction of psychological science.

While our educational leaders were gathering their psychological ideas from the fireside, so to speak, philosophy and scientific psychology were being wrought out in the closet. The influence of the scientific spirit upon educational doctrines was consequently but slight. There was, however, one of the leading philosophers, John Frederick Herbart, who, foreseeing the need that education would have of scientific treatment from the standpoint of psychology, devoted much of his time to the elaboration of a rational system of pedagogy. Under the influence of his thought, a vigorous school of educational thinkers has arisen in Germany who are known collectively as Herbartians, but who represent within the school somewhat widely varying theories. Among the number, Dr. Lange has perhaps exhibited the happiest combination of popular presentation and scientific insight. His book will interest the simplest and instruct the wisest; for, being on the one side concrete and readable, it is on the other founded on painstaking research, not only in Herbartian, but also in other modern scientific psychology. A prominent merit of Lange is that he shows us the lines along which we must work in order to reach a solu-

tion of educational problems requiring this new element of psychology scientifically developed. Not only does he point the way, but he pursues it. He leads us into a fundamental study of the nature, kinds, conditions and significance of apperception; he shows what influence it is to have upon the choice and arrangement of the subject-matter of education; how we can investigate, extend, and utilize the child's store of experience, and how to bring about an adequate union between the growing mind of the child and the subject-matter of instruction through the development of the best methods of teaching; finally, in the Third Part he gives us a masterly survey of the history of the term as explained by Leibnitz, Kant, Herbart, Lazarus, Steinthal and Wundt. One lays down the book, after reading this chapter, with the reflection, that if these men have not said the last word upon apperception, it is still much to have said the first.

Believing that this book above all others is best adapted to introduce the young teacher into that realm of educational thought in which the results of modern psychology must henceforth be an indispensable factor, the members of the newly formed Herbart Club collectively offer this translation to their fellow teachers.

CHARLES DE GARMO.

SWARTHMORE COLLEGE, PA., Jan. 1st, 1893.

PART I.

THE THEORY OF APPERCEPTION.

A PSYCHOLOGICAL INVESTIGATION.

I. NATURE AND KINDS OF APPERCEPTION.

MAN enters life as a stranger; he knows nothing of the world that receives him: it is to him a new, unknown country, which he must explore, which he must conquer. How is this to be done? Nature assails his senses with a thousand allurements; she sends the rays of light that she may open his eyes to the innumerable things of the outer world, she knocks upon the door of the human spirit with excitations of tone and touch and temperature and all the other stimulations of the sensitive nerves, desiring admission. The soul answers these stimuli with sensations, with ideas; it masters the outer world by perceiving it.

But this is not brought about by a mere passive reception of outer impressions, as men were once perhaps inclined to think, for the soul is not a tablet upon which the outer world engraves its messages, not a mirror in which things are reflected, and ideas are not mere images of things.¹ On the contrary, in the moment of perception, the mind is

¹ This is a reference to John Locke, who represents the soul as a *Tabula Rasa* on which experience writes its messages. See Book II., Chap. I., of Locke's *Essay Concerning Human Understanding*.

thoroughly active, since it transforms a physiological occasion into a psychical result: or, in other words, since upon occasion of a nerve-activity it responds with an action whose content is entirely different. What it is that the outer world effects in the mind, what activity in harmony with its own nature the mind manifests in consequence of a certain sense excitation, can be seen in the sensations that come immediately into consciousness. Therefore, strictly speaking, these sensations do not tell us how the things of the outer world really are, but how they appear to us. We think, indeed, to recognize the true nature of things through our perceptions, because things are the occasion of our perceptions; but what we call the qualities and activities of things are only our sensations arising from the nerve excitations caused by these outer objects.¹

Yet all that we perceive is not the mere appearance; the outer world is not the bare product of our perception. For, though the mind creates its ideas in consequence of its own nature, it does not do so without corresponding outer stimulus. That things are external to us, that they affect us according to certain laws, and occasion in the soul specific reactions corresponding to their qualities, that we can make them serviceable to our wills according to those laws, — to all this our perceptions testify beyond a doubt. Yet, for all that, they do not reveal the actual nature of things. Our perceptions through their rich variety teach us to be at

¹ For example: All that a bell does when it rings is to set the air vibrating. This is not sound as we experience it, but the vibrations come to the ear and stimulate the auditory nerve. This nerve excitation is conducted to the brain, and the mind itself responds in what we call the sensation *sound*, which must be considered as something quite different from the vibrations of air set up by the bell. The same relations exist between the vibrations of ether, which the physicist can measure, and the resulting sensation that we call light.—[ED.]

home in the world and to master it; "but no created spirit ever penetrates to the heart of nature."

Thus, in general, we master the outer world through our perceptions, and only through them; yet in their very nature there lies at the same time an important limit for all knowing. Just because the perceiving mind does not passively receive external things or their images, because nothing foreign can press in upon it or be communicated immediately to it, but because it relates itself actively to all outer excitations and responds to them in its own way, therefore, in a strict sense, our perceptions have only relative truth and validity.

This activity of the perceiving mind, however, explains another important fact. It is a well known experience that one and the same object seldom occasions precisely similar perceptions in the minds of different people. Of the same landscape the poet's image would differ greatly from that of the botanist, the painter's from that of the geologist or the farmer, the stranger's from that of him who calls it home. In the same way, one and the same speech is often understood in as many different ways as there are hearers. What does not the child see in his toys, the devout mind in the objects of its devotions! What does not the experienced reader of human nature see in the wrinkles and folds, the wilted and weather-beaten features, of a human face! How much do the gestures, the play of features, the glowing or fading fire of the eye, tell him of the battles and storms of the soul! And the artist, does he not perceive in a work of art a thousand things that escape the closest attention of the ordinary observer? Has not each of us the sharpest kind of an eye for the objects with which our calling makes us best acquainted? In the voices of nature the youthful lover of birds, like man in the state of nature, hears the

emotional and volitional utterances of related beings, while the Malay says of his bamboo forests, from whose branches the wind entices the most manifold tones : "The forest organ plays for each his favorite tune."

We see, therefore, that when two persons perceive the same thing their perceptions are not precisely alike. There are as many different ideas of one and the same thing as there are observers. Whence this variation in apprehension, with otherwise similar sense apparatus? Were we in perception chiefly passive, could the things of the outer world impress themselves immediately upon our minds and thus stamp their nature upon it, they would necessarily always leave behind the same ideas, so that a variety of apprehension would be impossible and inexplicable. The fact, however, that every observer contributes something to the sensation, and thus alters and enriches it, speaks unmistakably for the activity of the mind, which, upon occasion of sense-excitations, must perform the main office and create the perception in accordance with that which occasions it. This fact points to an activity the strength of which depends essentially upon the sum and the kinds of psychical products already present; for precisely those spiritual elements that accompany the real content of the sensation allow us to conclude as to the causes to which the perception owes its rapid assimilation as well as its peculiar coloring. The mind apprehends the things of the outer world with the assistance of what it has already experienced, felt, learned, and digested. And so it comes about that with nearly all new perceptions the former content of our minds makes itself felt, so that we become conscious of more than that which the objects themselves furnish us, seeing the latter throughout in the light of similar ideas already present in the mind.

The process of perception must not therefore be regarded

as such a simple matter as superficial observation might seem to indicate. It is not merely becoming conscious of nerve-excitations.

In order that a sensation may arise, there is, as a rule, a fusion or union of its content with similar ideas and feelings. With the assistance of the latter, the sensation is held in consciousness, elevated into greater clearness, properly related to the remaining fields of thought, and so truly assimilated.

We call this second act, in distinction from that of simple perception or the reception of a sensation, APPERCEPTION, or mental assimilation. This is a psychical process which has a validity beyond mere subjective perception, and is of the greatest significance for all knowledge, yes, even for our whole spiritual life.¹ Let us see therefore, the laws according to which this process is completed.

¹ The inquiring mind is likely to ask at this point: Is it possible to have *perception* without *apperception*? We may say in general that knowledge is necessary for the assimilation of knowledge, and this is the side of apperception of most importance to us as teachers, but some are curious to know how, according to this, knowledge gets a start. The author has shown at the beginning that a spontaneous activity on the part of the soul in accordance with its own nature must be presupposed in order that we may have any experience at all. In the case of the bell, for instance, the vibrations of the air are contributed by the object, but the mental response that we know as *sound* comes from the mind itself. In this way it is possible for a knowledge of sounds to start, without there having been any previous experience of sounds to serve as interpreting ideas. We have thus in distinction from the apperception in which knowledge is involved a *primary* apperception, without which we should never know anything. As a rule, Herbartian writers emphasize the cognitive phases of apperception, in which new knowledge is assimilated by the products of our former experience, in the form of knowledge, feelings, purposes, interests, etc., partly because these are the phases of the subject of practical importance to pedagogy, and partly from the implications of the Herbartian system of psychology. A careful study of the historical sketch at the close of the volume will reveal to the reader the attitude of the various thinkers in respect to this topic. — [ED.]

Suppose we have the rare phenomenon of an eclipse of the sun. Rays of light of varying strength come from the lighted part of the sun's disk, and fall upon the retina of the eye. A physical process arising outside of the body affects at once our nerves of sight. Hereby the peripheral ends of these nerves are stimulated to an activity which is conducted as a nerve-excitation to the central ends of the nerves and there causes a specific change (excitation of the ganglion cells), which is characterized as the release of the nerve-excitement. This is a physiological process, which in time and cause seems bound up with the physical one, but which is in its nature entirely distinguished from it. To these external processes, and conditioned and occasioned by them, is now added a pure inner activity, which seems to have nothing in common either with vibrations of ether or with nerve currents; it is the reaction of the soul, a sight-sensation. This is the psychical act with which the perception closes. We naturally receive from the continually changing disk a variety of sensations, which, united and related to the same object, give us a picture of the eclipse of the sun; this is a subjective perception.¹

Only a new-born infant, in so far as it may be supposed to see at all, could stop at this stage in the perception of the outer impression. During the first months of life a human being would perceive this rare celestial phenomenon with dullness and indifference, and without understanding or interest. He will at this stage have nothing to add to the given impression; he will indeed not be aware of all that is to be seen, so that he can take away no particularly

¹ A perception in this sense of the term does not differ from a sensation, except perhaps in complexity. We usually regard the sensation as the simplest psychical reaction against the nerve-current caused by a physical stimulus. — [Ed.]

clear and sharp image of the object. Where the soul has gained but little content, it perceives only "according to its original nature," that is, dimly and weakly.

It is very different with the adult. He gains from the same phenomenon of nature a far richer, sharper, and clearer perception. We notice not only the gradual eclipse of the sun, but we recognize also its cause. We see a dark disk enter the sun's field of light, and say to ourselves that this is the unilluminated side of the moon, which in its passage around the earth, is now passing between us and the sun, and whose cone of shadow hides from us the star of day. To this we add the comforting certainty, that all this has to do with right things, that the eclipse is proceeding according to known and fixed laws — a thought that goes far to remove a large part of the emotion-stirring power of this unusual occurrence.

Whence comes this perception, so rich in content and clear in outline? It has evidently arisen under the influence of the related thought content, with which we have met the outer impressions, and under the influence of the observations and knowledge that we have formerly gained through instruction, reading, and personal observation of the heavenly bodies and their movements. It was with the help of what we already knew of this keenly expected natural event, and of similar reproduced ideas, that we created this new perception and placed it in an orderly position in the organism of our knowledge, so that it now forms a clear and definite part of the same. WE APPERCEIVED IT. Not unessential is the service rendered by the will, which is here led by intellectual feelings. As we were viewing the astronomical event with close attention, it not only correctly adjusted the sense organs for the observation, but it removed disturbing ideas as far as possible from consciousness and admitted only such

as were favorable for the assimilation of the new. This was accompanied by a corresponding physical effort, *viz.*, that of tension, which made itself felt in the sensation. At the moment of successful apperception, as would appear from Wundt's investigations, the sensory nerve-current was transferred from the central ends of the nerves to a region lying in the front part of the large brain, which is reckoned to be the apperception center. From here the excitation was partly directed back to the sensory centers, whereby there was a strengthening of the perception, and partly conducted further to the muscles of the eye, in which certain feelings of tension arose.

Reviewing now the parts of the process to be observed in the act of perception, we find an extraordinary number of them: sense and motor stimuli, sensations of sight and muscles, reproduced ideas, activities of feeling and will—all these are exercised in the production of an apparently simple result without our being conscious of all the actions simultaneously. There are, however, two chief activities to be distinguished in the whole process. We perceive in the eclipse, first, just what the original constitution of our minds necessitates, even if they were no more developed than the mind of the infant. In this way a PERCEPTION arises. But through the ideas and skill obtained by former experience, we observe much that remains hidden to the inexperienced, and we add to the subjective perception numerous psychical elements from our well-stored minds, which were not immediately given in the observation. The mind apprehends outer impressions in accordance with its wealth of knowledge gained through former activity. THE PROCESS OF PERCEPTION BECOMES ONE OF APPERCEPTION.

The fact that the act of apperception is accomplished under the influence of the present knowledge store of the

mind, makes it comprehensible how one and the same natural event can find such different interpretations. What we observe with such quiet self-possession, and even elevation of feeling, has always been a cause of horror and powerful fear with savages and other primitive peoples. They see the sun threatened by demons who would rob it of light, by dangerous monsters who would devour it. These ideas are perhaps most immediate to those whose existence is filled with unceasing struggle against hostile neighbors and powerful beasts of prey. And therefore, because the eclipse appears to them as a gigantic war of worlds, as a fatal event, threatening to destroy even themselves, it is natural that their minds should be moved by the most powerful emotions. When, however, the idea of the heavenly bodies and their ceaseless change has gained a fixed place and meaning in the religious system of a people, when the sun is adored as a sublime God of Light, who rules the world and the fate of man, then this celestial phenomenon must, in accordance with ruling ideas, be apperceived as a religious event. Once when the Medes and Lydians stood opposed, ready to fight a bloody battle, the heavens suddenly darkened and the sun lost its light. Then they recognized that their gods, Ormuzd and Mithras, were angry at their deeds; they thereupon lowered their weapons, and concluded a peace with each other.

In the case of the observation described, we saw that the acts of perception and apperception, however clearly to be distinguished according to their nature, were not completed in different times, as if the second, perhaps, followed the first in noticeable time-distinction. On the contrary the act of perception occurred simultaneously with that of apperception and essentially under its influence. The question arises whether this is always so, whether apperception always ac-

companies perception. We will test the question with a further example.

In the theater at Corinth the assembled multitudes listened to the first drama that had been played before them. What the furies, the dreadful spirits of revenge, had revealed in terrible song and dance had moved all hearts, and a solemn, secret dread rested upon every mind. Suddenly in the midst of the deep stillness, there rang out the words :

See there! see there! Timotheus,
The Cranes, the Cranes of Ibycus!¹

Had these words been uttered at another place and before people who knew nothing of Ibycus and his sad fate, it is probable that they would have passed quickly out of consciousness without leaving any deep impression behind. The people could have made nothing out of the strange cry, and would have paid as little attention to the two men as to the passing cranes. The impression, like many other fleeting, indifferent ones, would have remained as something isolated and external, a mere perception easy to be forgotten. But it was otherwise in the theater at Corinth with the assembled people. Here, the name of the lamented singer fixed the attention upon the few, and in themselves innocent, words of the murderer, so that they did not pass by unheeded. Here, the unwary exclamation found a loud echo in the hearts of the hearers. True, they are at

¹ The story of the Cranes of Ibycus is as follows : While traveling in the neighborhood of Corinth, the poet Ibycus was waylaid and mortally wounded by robbers. As he lay dying on the ground he saw a flock of cranes flying overhead, and called upon them to avenge his death. The murderers betook themselves to Corinth, and soon after, while sitting in the theater, saw the cranes hovering above. One of them either in alarm or jest, ejaculated : " Behold the avengers of Ibycus," and gave the clue to the detection of the crime. The phrase, The Cranes of Ibycus, passed into a proverb among the Greeks. — *Ency. Brit.*

first led only by an obscure feeling, a premonition. They do not yet know what these words signify. What should these two strangers have to do with Ibycus; — they, the rough men, with the cultured poet? How does it happen they speak of *his* cranes? Such and similar thoughts prevent the immediate comprehension of the unusual words. Hence the poet with his psychological tact allows a few moments to pass, before the hearers understand. At first the flock of passing cranes claim the senses of the observers. Then the words about the Cranes of Ibycus are carried — even if very soon — in wide circles to the lowest seats, and awaken anew the old song. And now the excited multitude breaks out in queries and suspicions: “Ibycus, whom we bemoan? The man slain by the hand of a murderer? What ails this man? What can he mean? What is the meaning of this flight of cranes?”¹

Numerous ideas are now called up by the new perception and placed in relation to it. All the thoughts are collected, that is, those which can serve to give significance and extension to the perception. And in fact, of all the ideas called to consciousness, two groups soon appear that are able to contribute to an understanding of the obscure fact of the observation. They are, first, vivid ideas of the ruthless murder of the poet, united with feelings of deep sorrow and moral indignation, accompanied by the desire to find the murderer, and the resolution to attend to every suspicious circumstance. Awakened from its light slumber by the name of the murdered man, this group of ideas breaks forth with new power and lends the attentive will a special en-

¹ Der Ibykus, den wir beweinen?
 Den eine Mörderhand erschlug?
 Was ist's mit dem, was kann er meinen?
 Was ist's mit diesem Kranichzug? — SCHILLER.

ergy and endurance. In the second place, all the earnest thoughts and feelings spring up, which the song of the spirits of revenge has awakened in the hearers: the fixed certainty that nothing evil remains undiscovered and unavenged, the feeling of solemn awe before the just, almighty, and omnipresent rule of the gods. Hence arises the thought: What if the gods in confirmation of the message of the furies have produced the murderer? What if he has involuntarily betrayed himself through thinking aloud? Strange indeed are the ways of celestials. Why should they, indeed, not employ cranes for the discovery of the murderer?

“ Now with the speed of lightning there flies through all hearts the warning thought: Attend! This is the power of the furies! They avenge the murdered poet! The murderer reveals himself!”¹

The murderers are seized, they grow pale and can give no satisfactory explanation, so that men read their wicked deed in their unsteady looks and distorted features; that single thoughtless exclamation has become the proof of their guilt. Apperception rapidly accompanies the perception of the outer events, which close with the confession of the evil doers.

Evidently in the present case perception and apperception are not completed simultaneously, but the mental assimilation follows after an appreciable time. One may, indeed, ascribe to apperception the apprehension of the sounds uttered by the murderer as words and sentences, in so far

¹ Und ahnend fliegt's mit Blitzeßchlage
Durch alle Herzen: Gebet adt!
Das ist der Eumeniden Macht!
Der fromme Dichter wird gerodhen,
Der Mörder bietet selbst sich dar. — SCHILLER.

as the observers recognize these as familiar sounds and words representing ideas of certain things, and in so far as they have united these mental products into a judgment. However, this apprehension is so meager and indefinite, so external and isolated, that, in comparison with the later deeper comprehension, they may well be termed perceptions. At any rate they are further apperceived by the aid of present ideas, and only after this is done do they attain the proper content and adequate clearness. There may consequently be perceptions that are not immediately assimilated; not every perception is at the same time an apperception in the cognitive sense of the term. Desultory talk sleeps in deaf ears. The young retain many a word, many a sentence purely mechanically, without understanding. It may be years after, that the meaning of a form of speech occurs to us. Then we recognize and understand a perception that to our childish mind appeared a sphinx's riddle. And even to the adult, there come occasionally words and sentences, perceptions, or thoughts so strange and rare, that he knows not at first what to make of them, and catches himself, perhaps, asking with curiosity, what sense or significance these new things may contain for him.¹

We undoubtedly have perceptions that are never apperceived. In this list we shall find the earliest, isolated sensations of the child; those perceptions that we do not know what to do with; and such as on account of flagging atten-

¹ Lotze in his *Psychology* narrates the following interesting occurrence: An observer had tried the effect of a narcotic upon himself, for scientific purposes. When he awoke from his stupor, he recognized the persons present in the room, but knew not what to make of himself. Only after his glance had rested on the mirror opposite did he recognize himself. Only at this point, in the first instant of recognition, did perception become apperception.

tion or of transient character sink rapidly under the threshold of consciousness.¹ Yet these form only the exceptions.

In most cases — the more surely, the richer the mental life is — perception is accompanied by apperception. Whether immediately or after a shorter or longer period of time, depends essentially upon the kind and intensity of the reproduced ideas that come into relation to the perception. If we repeat a perception often experienced, as when, for example, we recognize a friend, a street, a tree; identify a sound or the tone of a voice as well known, or read what is written or printed, then the perception fuses at once with the nearly identical or very similar ideas that meet it in consciousness. Apperception moves here in known and easy roads, supported by established functional disposition of the nerves of sense. Even where a new perception enters and is recognized as belonging to known conceptions and categories, as when a botanist at the first glance classifies a plant seen for the first time, or a judge classifies a punishable offence under a certain paragraph of the law, the process of apperception goes on lightly and without delay. It proceeds most rapidly when the new idea does not need to recall similar old ideas, but when these already stand high and clear in consciousness as ruling ideas.² Apperceiving notions

¹ This is supported by a citation from Jean Paul Richter: "Goethe apprehends everything upon a journey; I nothing at all. With me everything dissolves like a dream. I travel through cities without seeing anything; I am stirred only by beautiful regions. I know and see indeed all the particulars of life; but I inquire nothing about them and forget them."

² To the lad who, with ghost-stories in his head and fear in his heart, hastens homeward over the barren moorland at night, the harmless occurrences about him become in a trice the most terrifying specters. [This suggests the story of Ihabod Crane, by Irving.] In the rustling leaves he hears the "graveyard ghost"; the rattling of the reeds is the "unholy spinner"; in the gurgle of the water at his feet he hears the melody of the "false fiddler"; before him he sees clearly "the unhappy woman," lamenting over her poor lost soul; and shuddering he hurries homeward.

stand here, as Lazarus remarks, "like armed men in the strongholds of consciousness ready to hurl themselves upon everything that appears at the portals of the senses, overcoming and making it serviceable to themselves."¹ In all these cases we are hardly conscious of apperception as a specific activity. We ascribe to the object of perception what has been added to it by our own minds. We think we merely perceive, when we have already assimilated. Only in exceptional cases (as where we recognize beloved friends) is this sort of apperception attended by any excitement of strong feeling. Apperception seems to proceed of itself, without our express will, and not seldom even against our will. It may therefore be regarded as *PASSIVE* apperception: not, however, in the sense that the soul is passive, for it is active throughout. This characterization, borrowed from Wundt, merely indicates that the process of apperception in this case follows the laws of psychical mechanism, and is not determined by free-working causes, as, for example, our will.

It is otherwise, however, where a new perception, on account of its content, awakens vigorous feeling, but cannot at once be related to its most appropriate group of ideas. It contradicts, it may be, all known experience so flatly, comes so unexpectedly and so strangely, that we can not relate it to what we know. The new, therefore, does not find its way into our understanding, it remains outside—we cannot grasp it. A certain unrest, an oppressive feeling of discomfort possesses us: we know not what to do with the unusual experience, what to say, what to think. The wonder, the astonishment at the incredible phenomenon may under some circumstances increase to violent emotion: we

¹ *Theory of Sense Illusions*, p. 14 (*Zur Lehre von den Sinnestäuschungen*).

"lose our heads," our presence of mind, and stand helpless before the impression, or respond to it with strange or unusual manifestations of will.¹ The new perception, therefore, at first produces a check or arrest, a struggle in consciousness; it stirs up thoughts and feelings which dissolve and supplant one another in rapid succession, and thus place the mind in a tense and restless condition. The momentary state of the mind is expressed in the acknowledgment: "I do not understand it (the new); it is incomprehensible to me."

If, during this time, the new perception appears to be the only fixed point in all the changing inner states, the natural question arises: What gives it power, in spite of all opposition, to maintain its place in consciousness? Of course its strength rests first of all in the continually active sense stimulus: what enters through the door of the senses usually proves to be stronger for the time being than the intensest reproductions that come to meet it. Soon, however, another factor makes itself felt. We remember that the perception called forth lively feelings. These as messengers of insight dimly indicate the real and subjective meaning or worth of the new perception for the remaining content of the mind. Before every acquisition of knowledge there hastens a feeling that gives premonition rather than insight, which indicates perhaps the direction in which the truth is

¹ This once happened to Livingston's faithful servant who wished to accompany the former on his journey from South Africa to Europe. "In his African home he had never become acquainted with any sheet of water that could at all be compared to that of the ocean. When he saw nothing but water round about him, saw the high ship gliding over the waves, he could not master the new and powerful impression, and, losing his presence of mind, dashed into the depths of the sea, never to rise again."—OLAWSKY, *The Idea in the Mind of Man*, p. 71 (*Die Vorstellung im Geiste des Menschen*).

to be found, but reveals nothing of the desired clearness and certainty of knowledge.¹ With the assistance of unconscious spiritual elements standing near the threshold of consciousness we feel dimly what relations exist between the new perception and our former experience, — whether the new wholly or partly contradicts the old in form or content. We recognize in the feeling, further, whether or not to expect that our inner life is to experience promotion or retardation on the part of the new perception. Not only are we dimly conscious of what it is in itself, but also in particular what it signifies for us, what it contributes to the elevation or depression of our mental life. Its relation to the self is instinctively grasped. Such feelings are well calculated to awaken a vigorous volitional effort on behalf of the perception. These feelings give to the perception an appreciable worth as motive for the will. It is the will that holds fast the perception on account of the feelings united with it, and prevents its sinking into unconsciousness. This happens, furthermore, through the assistance of related ideas; for the will is active amid the variegated flow of ideas and feelings, arresting those out of relation to the new, and bringing forward those that are similar. By thus, in a certain sense, establishing order among the offered reproductions, the groups of ideas most favorable to the perception with respect to their content and emotional tone may appear and unfold. Now begins the careful comparison of the new with the old, a weighing of the reasons for the union of the former with this or that line of thought — we reflect; form judgments, conclusions; resolve contra-

¹ "A remarkable feeling of truth or falsity proceeds every demonstration that reveals the one or the other, just as the feeling of the subtlest æsthetic lack or charm precedes the critical developments of either."
— JEAN PAUL RICHTER.

dictions, and form new combinations. We test all ideas lying close to consciousness to see which of them may most appropriately be united to the perception, or require a previous transformation — we “collect our thoughts.” When such a group of ideas is found, when it occupies the center of consciousness, together with its associated feelings and strivings, then all opposing ideas are sufficiently repelled so that the perception may fuse with it into a single product. The perception now becomes a new and related member of the old group, so that it is no longer isolated, but takes its place within a greater, well-arranged and firmly grounded order of thought; with the help of the latter it is assimilated, apperceived.

Instead of doubt and uncertainty, we have the consciousness of acquired knowledge. We are no longer confronted with a strange, puzzling perception, but recognize in it something long known or at least intelligible; now we see the new with other eyes, with the inner eye of understanding, of apperception. At the same time the feeling of discomfort that accompanied the reflection gives place to a feeling of enrichment and furthering of mental life. The overcoming of certain difficulties, the accession of numerous ideas, the success of the act of knowledge or recognition, the greater clearness that the ideas have gained, awaken a feeling of pleasure. We become conscious of growth in our knowledge and power of understanding, the successful mastery over an unusual perception, which at first threatened to surpass our comprehension, or maintain itself as an isolated fact. The significance of this new impression for our ego is now more strongly felt than at the beginning or during the course of the process. To this pleasurable feeling is easily added the effort, at favorable opportunity, to reproduce the product of the apperception,

to supplement and deepen it, to unite it to other ideas, and thus further to extend certain chains of thought. The summit or the sum of these states of mind we happily express with the word INTEREST. For in reality the feeling of self appears between the various stages of the process of apperception (*inter esse*); with one's whole soul does one contemplate the object of attention. If we regard the acquired knowledge as the OBJECTIVE result of apperception, interest must be regarded as its SUBJECTIVE result.

Here we have a kind of apperception that is sharply distinguished from the passive kind discussed above. There, we saw perception and apperception enter simultaneously or in rapid succession; here, the two mental processes are separated by an appreciable time. There, perception and assimilation were completed involuntarily, almost unnoted and without exertion of power. Here, the more difficult the reflection, and the longer the thoughtful, lingering contemplation of the idea, the more conscious of the apperception do we become. There, the activity of apperception follows essentially the laws of the psychological mechanism. Here, on the contrary, freely working causes assert themselves in the train of thought. In feeling, the value of the perception for the ego, its significance for the remaining life of ideas and emotions, is well known. The will, determined by feelings of a sensuous, intellectual, æsthetic, or moral nature, appears as a guiding and regulating force whose energetic activity comes into consciousness in strong sensations of innervation. It is the active apperception that we now become acquainted with. The oftener the same active apperception is repeated, the more easily does it take place; the less expenditure of strength will it lay claim to. The product of the process of thinking whose accomplishment requires at first much time, and a significant

degree of strength, becomes gradually condensed into notions and general judgments, the apperceiving force of which becomes of more and more value, and considerably abridges deliberation. In this way many phases of apperception are established, which, originally active in character, are now hardly to be distinguished from passive apperception.

According to our previous discussion, it appears as an essential characteristic of apperception, that a new isolated perception blends with an old related group of ideas, *i.e.*, that it is inserted into a larger and well-articulated mass of thought. This is not to be understood in the sense that every apperceived idea is localized at once, and united with a definite group of ideas with which alone it may be reproduced; rather, that one and the same perception may be apperceived by the help of different groups of ideas, and may, therefore, upon a different occasion, return into consciousness as a member of any one of those different groups.¹

¹ For example, why do we after the lapse of some time need to read an article of our own composition through again before it is finally disposed of, and why does it then, to our surprise, often make an impression quite different from that which we had when first writing it? Because now other trains of thought come to meet it which, during the composition, were kept out of consciousness; because we judge more freely and impartially the work that has become in a measure, strange to us. For this reason, it is a well-tryed rule of life in all those cases where duty does not bid otherwise, not to apperceive at once, thus coming to a hasty decision upon all new, unexpected, and important facts of experience; but rather to give the startled mind time to collect its thought, to "sleep upon" the matter, to deliberate upon it a second time. That which seems to-day intolerable, incompatible with one's honor and happiness, will perhaps be regarded to-morrow with quite other eyes; *i. e.*, apperceiving ideas are found which attach to the new quite another and hitherto undreamed-of significance. This is expressed in Eichendorff's "Morgengebet":

"I am to-day as born anew,
Sadness and pain have taken flight,
Cares that o'erwhelmed in evening's view
Give rise to shame by morning light."

Just because the apperception of one and the same fact may quickly

Therefore to say that a perception is united with other psychical products, only means that it is thought in close connection with them; and hence, the one regularly reproduces the other.

But what results from the appropriation of a perception by an older group of ideas? What do they both gain by this event? Especially, what does the apperceived perception gain?

Many a weak, obscure and fleeting perception would pass almost unnoticed into obscurity, did not the additional activity of apperception hold it fast in consciousness. This sharpens the senses; *i.e.*, it gives to the organs of sense a greater degree of energy, so that the watching eye now sees, and the listening ear now hears, that which ordinarily would pass unnoticed. This supporting strength of apperception is also of value with strong and distinct perceptions. It directs the attention to such characteristics of the perceived objects as stand out but little, and, therefore, are for the most part overlooked. Again, it sharpens eye and ear so that they observe better and more thoroughly. The events of apperception give to the senses a peculiar keenness, which underlies the skill of the money-changer in detecting a counterfeit among a thousand bank-notes, notwithstanding its deceptive similarity; of the jeweler who marks the slightest, apparently imperceptible, flaw in an ornament; of the physicist who perceives distinctly the overtones of a vibrating string. According to this, we see and hear not only with the eye and ear, but quite as much with the help of our present knowledge, with the apperceiving content of the mind.

However, apperception does still more. It often enriches

change, just because the fact may be adjusted to different apperceptive groups of ideas, it is a principle of the man of character not to make important decisions dependent upon passing moods.

the perceptions with characteristics which are not given at all in the sphere of perception, but which are added on the ground of earlier experiences or as a result of certain judgments. Compare the above perception furnished us by an eclipse of the sun, which contained much that could not be seen directly, but which was contributed to the perception by our thinking. In nearly all perceptions such supplementary apperception is active. We meet it in the practised reader of newspaper and romances, who really perceives only certain letters of individual word-pictures, and only a part of the words in each sentence, the rest being added out of the store-house of his own thoughts. We meet it in the geologist, to whom the rock-strata of the interior of the earth, with their impressions of plants and animals, together with their fossil remains, tell of mighty revolutions of nature in the remote past. We find it in every one who recognizes a person at a distance by a few individual characteristics, such as size, movement, clothing, etc. In the portrait of a noted man, we recognize much more than the painter with all his art was able to represent. We view historic landscapes and places in the light of ideas gained by our studies or other experiences of life. Hence how differently must the eternal Rome have been mirrored in the mind of a vassal of the middle ages, and in the soul of a Luther, a Herder, or a Goethe! And when, on the other hand, we recognize in the physical features of the country a natural explanation for certain historic peculiarities of a people or a race, the supplementary apperception in such a cognition is not of less value. Especially is it of great significance for the forming of space ideas. It has been determined that at first the child perceives only surfaces, and has no notion of the dimension of depth, or thickness. It grasps at everything (*e.g.*, the moon), without regard to its distance; all

objects are at first equally near to it. If it depended upon the visual sensation alone, the child would hardly gain the idea of depth. The sense of touch, however, soon becomes associated with that of sight. The peculiar sensations of touch, inasmuch as they unite with those of sight, teach us to distinguish solid bodies from surfaces, even when the latter are not in our immediate vicinity. How is this possible? How can remote objects which we cannot touch be perceived as solid bodies by us whose eyes perceive only surfaces? This fact seems only explicable with the help of apperception. Experience gradually convinces a man that those objects of the external world that carry to the sense of touch peculiar muscular sensations, such as only a solid body can cause, furnish also to the eye a visual image, which, with regard to the distribution of light and shade, to the greater or less sharpness of outline, etc., is distinguished from corresponding pictures, such as surfaces reveal.¹

These perceptions, as often as they enter simultaneously into consciousness, unite into a complete idea, into an idea of a solid body. Let it be granted that the same or a similar body is shown at a greater distance from us; at first it would act only upon the eye, and would reproduce only those elements of the complete idea before mentioned that owe their origin to a visual sensation identical with or similar to the one just completed. These are united, however, with certain muscular sensations which refer to the perception of a solid body, and not of a surface; consequently, these latter will enter consciousness according to the law of simultaneity, and, in connection with that repro-

¹ The exposition of the physiological conditions under which stereoscopic vision takes place, may be omitted here, where only the phase of apperception is treated that bears upon the origin of the idea of a solid body.

duced visual sensation, will present a mass of ideās which takes possession of the perception, explains it, and by a new element, the characteristic of third dimension, — completes it. Thus arises an assimilation of the new idea by the old, which is expressed in the judgment: That object is also a solid body. A person to whom this apperceptive help is lacking, who like the child in its first weeks and months possesses too few space ideas, will in this case perceive surfaces only, not solid bodies. We may say, therefore, that apperception should complete our space observation. It does this in so many cases that we usually overlook its influence, and believe that we perceive solid bodies directly, whereas apperception with the aid of experience really explains them.

From the foregoing examples, it follows that, while apperception strengthens and holds weak perceptions in consciousness, it also extends, adjusts, and completes them, and it aids all these psychical products in securing greater clearness and distinctness. It does this even where the apperception would not enrich the perception by a single characteristic. For example, if we comprehend an object of observation through a general notion to which it belongs, a new experience through a law to which it is subordinated, the perception gains in clearness by subsumption under the more generalized knowledge. We distinguish then between the essential and the non-essential in it, and the most important characteristics of the new perception receive a desirable strengthening through the apperceiving notion. Furthermore, the activity of the apperceived idea is increased with growing clearness. By its insertion into a large, well-ordered circle of thought accompanied by lively feelings, it enters into outer and inner relations with so many members of this group that a regular reproduction is assured to it. It

can fall into oblivion only with these ideas themselves. Besides, if it belongs to more than one group of ideas, then it will be favored, not only by frequent reproductions, but at the same time by those having many significations, by which its content will be made clear on the most diverse sides.

Indeed, there are cases when the reproduction is anything but fundamental, where it directly favors a superficial, fleeting apprehension of external objects. Numberless times we go through a well known street and pass imposing buildings without perceiving them better or more distinctly than at first. With the aid of apperception we find our way aright with only a fleeting perception, and so are not under the necessity of observing more keenly or searchingly. We cannot say how many times we have recognized and repeated the alphabet in our reading, and yet very few among us could copy accurately the large letters of the old English type without special preparation for the work; through apperception we have lost the habit of perceiving those phonetic sounds other than vaguely and incompletely. Not infrequently it even leads to wrong apprehensions. We imagine that we see before us in bodily form that which we wish or fear. When the boy in Goethe's ballad mistakes a streak of fog on the edge of the meadow for the Erlking, a shining willow for the Erlking's daughter, and in the whistling of the wind hears the alluring, coaxing words of the water-sprite; when Lessing's Recha sees in the Knight-Templar an angel sent from Heaven, we are not confronted by erroneous perceptions; "The senses do not deceive, not because they always judge correctly, but because they do not judge at all."¹ The illusion is due rather to apperceiving ideas posted at the threshold of consciousness; for, inasmuch as they passed themselves off as identical with the

¹ See Kant's *Anthropology*, pp. 33.

new and entering perception, they assimilated it accordingly and entirely changed it in accordance with their own meaning.

In such cases we cannot affirm that apperception increases the objective truth and clearness of the perception. We may say, however, that the perceptions through their insertion into other groups of ideas, even though wrong ones, gain in activity and strength. In later reproductions they may easily find the right aid to apperception, which subsequently corrects the defective apprehension and thus raises it to greater clearness.

Not only the apperceived idea, but also the apperceiving group of ideas, *i.e.*, the old reproduced combination, suffers, for the most part, a change in the process of assimilation. The oftener it returns into consciousness, upon the occasion of new perceptions, and undergoes its various changes in their presence, so much stronger and clearer may it become, so much the oftener is opportunity offered it to enter into new combinations, and thus to increase its own activity. In addition to this, the new perception finally blending with it in many cases enriches and essentially completes it. The distinct perception gained by observing a solar eclipse adds to the apperceiving ideas new characteristics; for instance, the appearances of protuberances, of the corona, of certain variations of color during the twilight, etc., without which these ideas will not appear again. The apperceiving thoughts and conditions of mind of the listening crowd in the theater at Corinth, through the unexpected, but energetically assimilated perception, received such an extension as was hardly to be expected in its completeness and rapidity. In like manner when the botanist puts a newly discovered plant into a known class, when the judge puts a criminal offense under a definite paragraph of the penal law, these subsuming notions

are extended. In this way—viz., that of enriching and extending—apperceiving groups of ideas gradually change to general images and logical notions; singular and particular judgments change to laws and rules. While new perceptions thus promote the gradual logical transformation of our thought, they richly repay the assimilating elements the service which the latter have rendered them in the act of apperception.

If the apperceiving group of ideas have wrong characteristics, then the perception undertakes their correction. This occurs in all cases where a fact that has been observed accurately and attentively, repeatedly obtrudes itself upon us. It occurs when our perception corresponds entirely to the object of sensation, and for this reason develops such strength and clearness that, notwithstanding the presence of notions in consciousness contradictory to it, we are not able to deny its truth. Thus, for example, the child learns from the green seed-capsules of the potato stalk that the potatoes are not the fruit, as he has hitherto supposed, but the root-tubers of that plant. Then by a visit to the zoological garden he learns, to his astonishment, that the otter is not, as he imagined, a water-serpent; or he corrects his idea of the sea-lion, or of the cray-fish, whose name has hitherto had only too much influence upon his ideas of this animal.

If the new perception is of such a kind that it corrects not only one or several old ideas, but important, far-reaching lines of thought, then the apperceiving mass of ideas undergoes a change which is equivalent to a complete revolution. Whole groups of thoughts then become roused, freeing themselves from the perception and forming themselves anew. We must give up fixed combinations of ideas that have become dear to us, and must make new asso-

eiations opposed to our previous notions. The process of assimilation now becomes not so much an addition to learning, as a reconstruction of learning. Naturally such a revolution is accompanied by an active exercise of the emotions. A painful unrest takes possession of us. At first, we do not know whether we are sleeping or waking; to whom we should yield; and a long time elapses before the material of thought, with its disturbed and broken combinations, gathers around a new centre and finally blends with it. Such apperceptions often indicate significant progress in the sphere of art and science. From Archimedes, Columbus, and Copernicus to Galvani, Volta, and the investigators and discoverers of the present day, the history of civilization witnesses how a single new perception, a single swift and happy thought, sometimes overthrows whole systems, and brings the investigating mind farther in a definite sphere of knowledge than the thoughtful work of many centuries has been able to bring it. Where the adjusting, upheaving activity of the new perception is extended, however, into the practical sphere of will and action, to ethical and religious habits of thought which hitherto ruled the soul, and from which proceeded the deepest and strongest feelings, the most numerous and the most active efforts, then apperception will often bring about a thorough transformation of the moral disposition, a new period of the inner life, of which the conversion of Saul, and the awakening of Zinzendorf¹ are sufficient examples.²

¹ The painting of the Crucifixion in the Dusseldorf gallery, with the inscription; "This I did for thee; what hast thou done for me?"

² We grant that in weak and characterless natures the change of ethical insight does not necessarily imply as a result the transformation of the will, that in such natures a contradiction between knowing and doing is frequently to be observed. But here the above mentioned presupposition is wanting, viz.: that hitherto an ethical circle of thought has determined

If in all these cases the new perception brings about so wide-reaching a change in old habits of thought; if it is the center of new combinations of ideas, then the question arises whether here the factors of mental assimilation do not change their rôle, whether the perception does not now appear as the apperceiving idea, and whether the old group of thoughts may not be regarded as apperceived. The dominating force with which the new makes itself felt in consciousness, and necessitates the loosening of fixed bands of thought, appears indeed to favor this view. That which, for the moment at least, rules the inner world and is a standard for other observations might very well be considered an apperceiving power.

But however long the new perception stands in the foreground of consciousness, however manifold are the corrections which the old concepts undergo by it, and however incompatible it may seem to be with the whole range of previous experience, yet ultimately it finds a place where it comes to rest in a group of ideas with which it is able to blend. Moreover, in so-called awakenings and conversions, in profound changes in a man's theoretical or practical views, so many fast-rooted, related notions remain untouched by the transforming influence of the perception, that the latter, with all the ideas which it has readjusted, may become inserted into the old as a new and valuable member. Where active apperception takes place with such intensity

and guided all willing and action, that the strongest feelings and efforts have arisen from ethical views and judgments. He who regards the good only as theoretical knowledge, and not as a source of noble inspiration and of vigorous resolution, may change his convictions repeatedly without his disposition being touched thereby. Moreover, we may also mention that a fundamental and lasting change of mind demands, beside the change of insight, also a continuous exercise of will in other directions.

and to such extent that we become actively conscious of an internal emotional struggle, then the apperceiving subject is never an isolated group of ideas, that, for instance, suggested by the perception, but all related ideas become apperceivingly active, together with their conscious and unconscious members. This is especially true of such ideas as are united to the empirical ego through feelings and efforts. Then let a perception act with as much transforming power as it may in a certain sphere of our knowing and thinking, it will finally, with all its new members, be united as an isolated and hence less powerful group to the old stock of thought now united with the ego in a thousand ways. So much do we stand under the ban of the past that even the most unexpected and important new experiences are not able, under normal conditions, entirely to overturn the structure of a man's thought, but they must be arranged as building-stones, and only as such can they be of any value in it. As the Lord suddenly appeared in heavenly light to Paul on the way to Damascus, and with the mighty, "Saul, Saul, why persecutest thou me?" startled his conscience, a transformation began to take place in this disciple of the Pharisees greater and more decisive than can easily be conceived. The crucified Savior whom he believed to be dead appears to him in person and convinces him that he lives. And how does he live! He whom Paul had scorned and reviled as a blasphemer and an evil-doer—he reigns in Heaven. Those whom he had hitherto persecuted and tormented as fanatics and apostates, the disciples and followers of Christ, are innocent, pious people, the true Israelites and believers in the Messiah. And in what a light does his own life and struggle now appear to him! That with which he believed he had done God service was vain error. That in which he had sought the highest glory had yielded him the deepest failure.

Now he must hate what he had before loved, and must love and reverence what he had hitherto hated. Truly a whole world of new facts and experiences streams in upon his ethico-religious thoughts and convictions. And how is it with regard to his new experience? Had the new satisfied itself in repressing the hitherto false and contradictory views and struggles in him in order to assert itself as a new center of thought and experience isolated in consciousness? Or with the help of the new was the whole remaining ethico-religious product of thought and feeling loosened from its relations and newly arranged ; in a word, was it newly apperceived? We do not believe so. For then the new, because it had entirely broken with the past of Saul, could have displayed no especial activity and vigor, notwithstanding its richness and its high emotional value. Out of Saul would have developed a converted, contrite, Christian soul, but never the heroic apostle to the heathen, who with the old strength served the new Lord. The comparatively short time in which his conversion took place, the victorious resoluteness and joyousness with which he, after a few days, confessed the Christ and proclaimed him, are proofs that he had comprehended and assimilated the new and important facts with the help of old habits of thought which did not need a transformation, with the help of a mental treasure whose urgent force showed itself effective even in the new sphere of religious life. The pure and stern idea of God that he had obtained from the writings of the old Covenant, the longing for the Messiah, which he shared with all believing Israelites, the honest faithfulness and piety, the staunch, manly will, the zeal for God and his cause, the full, deeply religious, and morally earnest apprehension of life which distinguished him from many others, — these were traits of his nature, which were in no respect at variance with the new

Gospel. Added to this came the more recent startling experiences. He had seen the religious courage and the enthusiasm of the disciples, those homely, untaught men; had looked into the glorified face of the dying Stephen, and he had perhaps carried away with him impressions which, on the long, lonely way to Damascus, had made themselves felt as reproaches and doubts.¹

Even if he now comprehends rightly the Heavenly manifestations and turns himself to the Lord, it does not happen so because the new perception has overpowered his whole religious thinking and willing, but on the ground of his previous inner experience, after severe mental conflict, he decides upon a change of view and of will so far as they were erroneous, and upon the insertion of the new experience into the present system of thought, into his whole emotional life. He does not give himself up to the new ideas as a captive without a will, but he has so many ethico-religious convictions at command that he is able to test the value of the former for his whole ego impartially, and to appropriate them with a free will — for he might also have closed his heart to the knowledge of the new. He apperceived the new with the help of ideas and states of mind closely combined with his ego.²

¹ In support of this view, whose correctness has been disputed from the theological side, we have the fact that Saul understood the words of the Lord in all their importance, while his unprepared companions perceived only a voice and nothing further. Accordingly the fact that Saul apperceived the purport of the call, presupposes ideas and states of mind which were favorable to the reception and understanding of the new. Such susceptibility gained through internal struggle might be lacking in his fellow travelers, for which reason they would obtain only a dim perception of the matter.

² The foregoing presentation does not claim to have taken up and described the process designated by theology as inner "regeneration." When we referred to some of the co-operating psychical factors we were fully conscious that the heart of man with its changes and its vicissitudes still

Where this does not occur, where new important experiences are not joined to the related old ones, but occupy an isolated position alongside and out of relation to them, thus becoming for themselves a power of the mind, then abnormal conditions predominate, which may easily give rise to mental disease. As here the failure in apperception may lead to division of the ego¹; so there where for the same reason a man must break with his whole past, which has become dear to him, — viz. : in the ethico-religious sphere, —

remains for psychologists an unfathomable mystery. Upon the ground of experience, and in the interests of moral freedom, we felt obliged to emphasize one thing, viz. : that the inner conversion is not synonymous with a purely mechanical exchange and displacement of the old by the new man; but that it presents an assimilation of the new facts of experience, a new formation of thought and effort which does not take place suddenly, but gradually. Where the ego decides freely upon the acceptance of new thoughts and sentiments, there the new never appears unconnected nor as apperceiving the old. For the ego of man is the representative of his previous inner experience. To be apprehended by it means to be joined to old fixed ideas and states of mind.

¹ We cite the old captain in Immermann's "Munchausen." He had fought with distinction under the French against the Russians, and afterwards, when everybody was marching against France, he fought in the Prussian service no less bravely against his former companions in arms. When peace came and everything around him was to be adjusted to his feelings — to the former French sympathies and to the newly awakened spirit of the Fatherland — such a union of opposing inclinations and sentiments could not succeed with the old soldier: he could not entertain the idea that within the period of a year he should have been a brave Frenchman and a brave Prussian. The memories of the war with their sympathies and antipathies had, in consequence of the rapid change, encamped separately side by side, and his rigid though honorable character allowed no reconciliation between them. Finally after a dangerous sickness which made him free, body and soul, to a certain extent, he found equilibrium again. He established military order in his memories. He arranged two rooms, of which one was dedicated to recollections of the Napoleonic victories, the other to the memory of the glorious deeds of the champions of freedom. He always occupied them by turns according to his dominating political mood. Now he was entirely French and exclusively absorbed in the splendor of the Napoleonic time, and again he was decidedly Prussian and a panegyrist of the German uprising.

it may lead to a weakening of the ego, to a paralyzing of his feeling of selfhood and of his mental energy.

Under normal conditions, on the contrary, even the strangest and most exciting perception will finally find its resting place, its apperceiving subject, in fixed habits of thought and feeling. The mental soundness of a man is essentially determined by such a union of the present with the past, by the assimilation of new impressions with old ones.

Up to the present time our presentation of the process of apperception has been limited to cases where an external perception reaches assimilation. If we recollect now that the latter after the cessation of the external excitation becomes an idea, which retains all the combinations that have hitherto been entered into, the conjecture arises that an apperception may come to pass even between mere ideas. Indeed, reproduced psychical products as well as perceptions, internal as well as external perceptions, may be inwardly assimilated. We have here, then, only a special case of the general process of apperception, to which we must devote a few words.

Of all the concepts which the soul of man creates, many are so weak and fleeting, many strike so strong and so numerous contradictions, that they either become obscured at once or find no circle of thought which they can join. We do not notice them, or do not know how to make anything out of them; we are not able to make them agree with the other ideas. In both cases, whether they rest apparently forever below the threshold of consciousness or hold themselves apart in consciousness, no apperception has taken place. Hence those ideas, not being fully understood, have but a limited value for the mental life; in case they continued in this condition, they would, finally, be entirely lost. If a group of thoughts nearly related to those weak and isolated

ideas rises into consciousness (either spontaneously or mediately reproduced), and with a strength and clearness which maintain it against all opposition; if by virtue of its manifold combinations, which it entered into with the other masses of ideas, it dominates the latter for a time, then there will be a movement among the related thoughts, which till now were not rightly understood. We shall recollect much that seemed to have fallen already into oblivion and much will become distinct and clear that was to us until now a "book with seven seals." The dominating group of ideas illuminates the darkness and now we cannot comprehend how such a fact could escape us, how we could not at once understand it or could interpret it wrongly. Light now appears, "the scales fall from our eyes," we see clearly that which was hitherto hidden from us; the isolated and scattered elements of thought have now found a fixed point with which they can unite, with reference to which they can adjust themselves; the apperception is complete.

How often in the soul of the poet may such thoughts and inner experiences await the happy hour when a favorable mood grants them the right expression, the artistic form! For poetic creation is more than a clever play of the fancy. Lively, tender, memories out of the poet's own emotional life must come to the help of the poetic fancies, and there must come also that formative force which, as a regulating power, enters into the variegated world of fancy, chooses thoughts and tests their worth; which unites and builds according to a fixed plan; and which subjects even the creation itself again to criticism, rejecting the unessential disturbing accessories and supplying deficiencies. This formative force of the will, however, is awakened and guided by certain æsthetic ideas and feelings at the root of the artistic conviction and mental bias of man. The latter stand in the background of

the stage and, themselves invisible, work upon the ideas in the foreground of consciousness so that the latter attain a right meaning and deeper significance in an artistic whole. Hence in the act of poetic creation, habitual ideas and æsthetic feeling appear as the apperceiving factor.

The case is similar with the investigator who seeks to solve a scientific problem. From within arise thoughts of possible solutions, of ways and means to the end; but likewise from within there arises a system of thoroughly assimilated knowledge with which the newly obtained ideas must square themselves, opposing elements being repressed and kindred ones absorbed. Here the apperception proceeds from an acquired fund of knowledge which possesses a predominating activity and, as authenticated and firmly fixed opinion, measures itself with newly arising ideas, thereby either supporting or condemning them.

Not always, as in the foregoing examples, is the apperceived idea the less powerful factor, which adjusts itself according to the content of the combination of ideas already present. On the contrary, it may also upon occasion display such strength that the apperceiving ideas undergo correction and change from it. When the investigator in the sphere of science, in consequence of fortunate combinations of ideas, unexpectedly reaches an hypothesis which throws an entirely new light upon hitherto obscure and unintelligible facts, and teaches him to grasp certain manifestations in another and deeper significance; when to the jealous man, harmless memories which were to him for a long time indifferent, or perhaps precious, suddenly become accusers of one who is to him dearest upon earth (Othello); when his diseased fancy sees treachery everywhere and busily brings ever new material to the fire of his passion, — in every such case, active reproduced ideas are present which at first arouse certain

lines of thought, in order finally to insert themselves into the related groups, thus giving them a new illumination. Often these notions do not stop at correcting individual observations, but they not seldom break through and transform whole regions of thought. Then there arise in the soul such storms as we have spoken of above, occasioned by overpowering sense-perceptions.

According to the foregoing, there is not the slightest doubt that internal perceptions and reproduced psychical products may be apperceived just as well as external perceptions; it is not necessary therefore that one of the latter be present. The first form of assimilation has since the time of Herbart been designated as internal, the second, as external apperception. Yet the names chosen are not to be regarded as entirely suitable. Others have remarked in criticism that apperception — even the external apperception — is always the assimilation of an internal condition, and that for this reason there is, strictly speaking, only internal apperception. In that case the expression “internal apperception” or “apperception of the inner perception,” favors the erroneous assumption that the second kind of apperception is synonymous with designed internal perception, or self-observation. It would seem as if the apperception of an inner state or idea, always includes an act of self-observation. This is, however, by no means the case.

In apperception as we have hitherto known it, our consciousness is directed exclusively to the content of the ideas. We give ourselves up so entirely to the ideas as represented that, under circumstances of this kind, we forget ourselves and our activity. As the soldier in the midst of the confusion of combat is so completely taken captive by external impressions that he does not think of his own condition, so the person apperceiving lives chiefly in the objective world of

observations and thoughts. He asks concerning the relations existing between them, but not concerning the subject to which they belong, or the activity which creates them. In strong emotion, in states of passion or enthusiasm, the apperception often gains very unusual, even though very one-sided, results, while the moral self-examination that gives attention to one's own thinking and acting is not present. Thus, for instance, the poet in the moment of happy creation is entirely fettered by the objects of his fancy. The better the apperception succeeds, the farther is he removed from observing himself in his work. Indeed, untimely reflection would hinder the progress of apperception.

On the other hand, if we observe ourselves, our consciousness is directed especially to the process of representing, willing and feeling. To the consciousness of ideas is associated the consciousness that we produce them. That which has occurred in our minds, or is occurring, becomes the object of a new representation. We have then not merely thoughts and ideas; but, at the same time, we become conscious of them as of an internal activity, and this activity proceeds from one and the same subject, from the ego. These ideas belong to us. We become conscious of a matter. In that case, the ideas do not stand, as in the case of apperception, as objective images before the soul, but they penetrate deeper within, until they come into close connection with the germ of the self, the ego. In apperception, the attention turns principally to the object of representation; in self-observation, on the contrary, to the subject of representation. In the one case, we ask whether two psychical products unite with one another; in the other, how this combination took place according to psychical laws, and how our ego-consciousness presented itself. And we find, as our own activity

becomes the object of observation, that we have judged or willed, thought or felt, imagined or calculated, sought or shunned, or whatever else the inner process may be called. We recognize this inner activity not only as ours, but we distinguish it also from every other, and thereby give it a definite content. We arrange it then into certain classes of inner events, just as in the apperception already described we arrange the perceptions presented to our senses into certain categories of outer experience. Consequently, self-observation is nothing but apperception, although of a special and higher kind, inasmuch as here the subject of apperception is the ego itself. Indeed we often become conscious, in the other kinds of apperception, of the inner relation in which the object assimilated stands to our ego, of the value which a perception has for our whole inner life. But while here this consciousness manifests itself in obscure feelings, in self-observation during an act of knowledge it becomes incomparably clearer. As the process of apperception comes to consciousness chiefly through the feelings of tension accompanying it, so in many cases a kind of internal perception awakened by those sensations may accompany the mental assimilation, only of course in the form of a feeling or of the general thought, "I think," or "I perceive." As soon, however, as this internal perception assumes a more active character and brings the individual psychical processes into review before the ego, it ceases to accompany the apperception. In this case a second perception follows the first, which was directed to the content of the ideas, and this second perception renders the process of apperception itself an object of observation and assimilation — an act of self-observation. It follows apperception, for in reality, as Drobisch rightly says, intentional self-observation is a constant failure: "the observation always comes later than the

occurrence." Our self-observation is for the most part, not an observance of what is now going on, but a contemplation that hastens on, after the event to be observed has gone by, a tarrying with memories. When the process of apperception has reached a conclusion in the judgment $A=Z$, then self-observation apprehends the individual parts of this occurrence as the peculiar conditions of the active soul, and the apperceived idea as the possession of the ego. This latter recognizes the product of apperception as the idea that is expressed in the judgment: *I have A*. We, *i.e.*, our empirical ego, then regard ourselves as the real subject of apperception. We recognize clearly the significance that the new perception has for our mental development. The more vigorous an active apperception is, the more surely does self-observation seem to follow it. This is explained partly upon the ground of the action of the will in the progress of the ideas and feelings, partly on the ground of the lively emotional and bodily excitations that accompany the occurrence. The latter are those which continue after the completed apperception, warning us of the inner events, and making us attentive to them. On the contrary, that which is easily and readily apperceived, or is indifferent to the ego, does not leave a deep impression behind it. It does not excite attention, and hence seldom arouses self-observation. Consequently the latter is neither a necessary characteristic nor a regularly accompanying manifestation of apperception. Self-observation frequently goes on obscurely side by side with apperception; more frequently still, the former follows the latter as a new and higher grade of apperception, or it may be entirely lacking.

Let us now sum up the essentials in the process of apperception. First of all, an external or internal perception, an idea, or idea-complex appears in consciousness, finding more

or less response in the mind, *i.e.*, giving rise to a greater or less stimulation to thought and feeling.¹

In consequence of this, and in accordance with the psychological mechanism or an impulse of the will, one or more groups of thoughts arise, which enter into relation with the perception. While the two masses are compared with one another, they work upon one another with more or less of a transforming power. New thought-combinations are formed, until, finally, the perception is adjusted to the stronger and older thought combination. In this way all the factors concerned gain in value as to knowledge and feeling; especially, however, does the new idea gain a clearness and activity that it never would have gained for itself. APPERCEPTION IS THEREFORE THAT PSYCHICAL ACTIVITY BY WHICH INDIVIDUAL PERCEPTIONS, IDEAS, OR IDEA-COMPLEXES ARE BROUGHT INTO RELATION TO OUR PREVIOUS INTELLECTUAL AND EMOTIONAL LIFE, ASSIMILATED WITH IT, AND THUS RAISED TO GREATER CLEARNESS, ACTIVITY AND SIGNIFICANCE.²

We are well aware that this explanation does not fully exhaust the nature of apperception. Mental assimilation is indeed an event that unites in itself various elementary processes, and in which factors are acting that elude observation. Without doubt it depends upon an interaction of ideas; but it is more than this, inasmuch as it also includes the products of thought and feeling arising through the ac-

¹ Yet it also happens that apperceiving ideas enter first, and call up isolated ideas for apprehension; as when, for example, we seek examples for a known rule.

² The derivation of the word apperception (from *ad* and *percipere*, to grasp, to perceive) signifies that a new perception is united with another, a new cognition is adjusted in proper order with present psychological products. Apperception is (according to Willmann) the "added apprehension, the co-operation of reception and reproduction of mental products," "the perfected apprehension of an idea by means of other reproduced ideas."

tivity of thinking. Its two principal kinds correspond to involuntary and voluntary attention; it is not, however, merely an energy holding the ideas fast in consciousness, but it embraces also the conditions and results of consciousness, the objective knowledge of the inner relations existing between the ideas. Finally, it is always accompanied by a fusion or blending of ideas, an accession of new, isolated elements to older and richer related thought. But it is more than a mere blending, more than a receptive taking-up of new impressions; it is rather their self-active apprehension and elaboration. It not only includes an increase in theoretical or practical knowledge, but at the same time it signifies an elevation of our feeling and effort, the apprehension of a new psychical product through the emotions. It is the process of growth of the soul; it is mental development.

2. CONDITIONS OF APPERCEPTION.

The result of mental assimilation, the facility or difficulty of process, its strength and power, are first of all dependent upon the nature of the apperceived as well as of the apperceiving ideas, upon the elements of thought and feeling accompanying them; *i.e.*, upon the existing conditions of mind and heart. While the two latter important factors, in consequence of their obscure, indefinite character, are little accessible to our observation, the significance of the former for the process of apperception may be more easily recognized. Our attention must, therefore, be turned chiefly to them so far as we have to do with the psychical conditions of apperception. For the sake of brevity and simplicity, however, it is usual to indicate the apperceived and apperceiving groups of ideas, including their accompanying states of mind, as the *object* and *subject* of apperception. Yet these expressions must be understood

figuratively; for in reality the thinking, feeling, and willing soul is the subject of apperception, or, in the case of self-observation, the real ego is the subject. The masses of ideas, moving toward one another, are not to be regarded as active, independent existences, but rather as means employed by the soul that knows and wills.

A perception or idea becomes the object of apperception, if, upon its entrance into consciousness, it finds more or less response; *i.e.*, if it calls up other ideas, together with the feelings and efforts associated with them. Such exciting force, however, is manifested by those ideas that stand in relation to old kindred groups of ideas, or to the ego. That which is entirely strange leaves us cold; the absolutely new is not understood. That, however, which recalls the known in its form or its content, often attains thereby a high value for the feelings; attention naturally turns to it. Well-known perceptions are assimilated quickly and without trouble — an act of apperception that is designated recognition. If, on the contrary, the new agrees with earlier experiences only in part, if it is but partially similar to that which we already know, then the assimilation is for the most part completed but gradually, and we become conscious of it as mental labor. Such apperception includes an act of learning. Wherever we are concerned with the discovery of truth, or the creation of thought products, the present mental store is always confronted by that which is relatively new.

These related perceptions that form the object of apperception should consist neither of weak, wavering ideas having no power to effect reproduction, nor of such strong, overpowering impressions as of themselves fill the consciousness and crowd out all other thoughts. A too rapid, as well as too slow, unfolding of the stages of a perception must also be avoided. The measure of time for such unfolding,

or development, will have to be adjusted to the greater or less facility with which the movement of ideas takes place in the individual in question. The more we allow time for the various parts of a perception to be taken up carefully, and the more sharply we distinguish them from one another, the more thoroughly is the apperception perfected.¹

It is because thoroughgoing apperception is added to deep æsthetic feeling, that solemn things so powerfully impress the mind. "And all things of slow movement, if not adverse to the idea on other grounds, approach the solemn" (Herbart). So much for the *object* of apperception.

Among the ideas awakened by a perception, those which for the time being display the greatest power are called the *subject* of apperception. The power of these ideas depends first of all upon their intensity and activity. Knowledge which has "flown" to us, which has been drilled into us, which did not arise from our own active experience, is deficient in such force. Book-knowledge is likely to give exhausted, feeble aids to apperception. He who sees only with the eyes of another and not with his own senses, is always lacking in vigorous, active thoughts

¹ In "*The Soul's Comfort*," a religious book of the middle ages, which contains numerous anecdotes illustrating the Ten Commandments, the Father-confessor asks a woman how many Pater Nosters she says daily. She replies: "When I come to Mass and God gives me grace so that I can say my Pater Noster well, then I say half a Pater Noster, or a fourth part, or a whole Pater Noster; but if I do not succeed well, then I say a dozen or one hundred Pater Nosters." Then she explained how this occurred. When she began the prayer earnestly and reflected upon all the love and faithfulness which her Heavenly Father had hitherto shown her and all men, then she could not easily get beyond the beginning, and would finish a whole Mass with the words: "Our Father." Just so it was with the next words. If she wished to reflect with true fervor upon every part, during a whole service, she could barely repeat the whole once. Only when she had no sincerity did she sometimes say fifty Pater Nosters. But then she did not count her effort successful.

that spring forth at the right moment and make themselves felt in the apperceiving process. One may have learned a marvellous amount, and yet in regard to capacity for apperceiving be a very stupid fellow. We ourselves must have elaborated that which is to gain force and life in us. For we not only learn more thoroughly the things we work out for ourselves, but with this self-helpfulness are closely connected the feelings of successful effort. But feelings are best capable of rendering mobile and permanent the multitude of our inner states. That with which the memory of painful or happy hours is associated, that which is entwined with the heart by a thousand threads, stands, as a rule, nearest to consciousness, and generally offers itself first to the newly-entering perceptions as an aid to apperception.¹

Ideas of high emotional value, groups of thought that proceeded from very strong, distinct perceptions, and, in consequence of frequent repetition, have made numerous

¹ This fact is very beautifully expressed by Vogel in the well known poem "Das Erkennen" (The Recognition):—

"A wanderer, with his staff in hand,
Comes home again from a foreign land;
His hair is begrined, his face is burned;
Who'll first know the lad that's home returned?"

His friend, the collector, does not recognize him, and even his sweetheart opposes a cool and reserved attitude to the greeting of the young fellow, so much has the sun scorched his face. But the mother? Ah! at the first glance she recognizes the returned wanderer. In her soul lives most strongly and warmly the dear son's image, glorified by the sunshine of unselfish, faithful love. So closely has the youth grown with her whole being that she has remembered him daily and hourly, and even in the stillness of the little church or the quiet grave-yard she has sent longing thoughts after her absent son. So entirely does his image fill her soul that she, in contrast with the collector and the sweetheart, has no room for other persons and interests, for distracting and diverting thoughts. Such true affection sharpens the aging eye, so that it turns steady and clear upon the stranger.

"Sorely as the sun his face has burned,
The mother's eye knows her boy returned."

combinations among themselves and with the self, manifest this activity and susceptibility, by virtue of which they return to consciousness upon the slightest occasion. They form such dominating habits of thought as arise from scientific study, professions, and daily environments.

True, the strength and activity of the apperceiving ideas do not of themselves guarantee the correctness of the apperception. The child, for example, whose relatively modest and defective store of experience is ready at hand, not infrequently apperceives more quickly than the adult. Yet on this account it contributes more to the external perception, thus giving rise to incorrect subjective apperceptions. The case is similar with the adult who, during his whole life, has not been freed from closely restricted relations, and in consequence of the limitation of his store of ideas, of the narrowness of his mental horizon, is able only with difficulty to bring his mind into harmony with foreign thoughts, customs and habits, being but seldom able to speak of them without prejudice. Here the strength of individual experience repeated a thousand times, and thus grown to a favorite habit, is a hindrance to the objective apprehension of the new; what is lost in logical consistency is made up in psychical intensity. And thus even forceful characters who have produced admirable results in some definite, practical sphere, and for this reason, being sure of victory, come to believe that they can dispense with all theory, are often found to be lacking in capacity of apperception for new facts of experience. They either dismiss the facts summarily or keep certain formulas and judgments ready, with which the new experience must be measured, whether for good or bad. They are only too much inclined to regard every innovation, so far as they grant it any significance at all, as only an old thought in a new garment. "Nothing new under the sun,"

— this is the constant magic formula for all uneomfortable facts and theories. “The good is not new, and the new is not good.” Thus without thorough testing, following for the most part the first impression, such people are accustomed to decide quickly, with over-weening confidence. In this ease the appereception is completed too easily and superficially; it leaves behind no strong feeling that influences the rest of the world of thought and arouses interest and will.

If, therefore, the appereception is to proceed vigorously and correctly, then, not merely strong and active, but also significant, wide-reaching, and plastic groups of ideas in which there is an indwelling tendency for completion and perfection, must confront the object of appereception. For only in such cases do so many related elements rise into consciousness that the new is not falsified by chance ideas, but apprehended by that thought-complex to whose content it corresponds most closely.

Yet, if it is to fulfil its end completely, the appereceiving thought-complex must by no means be lacking in careful elaboration and organization. Where the ideas do not stand in the right relation to one another, or where they suffer from obscurity and indefiniteness, there is to be seen that superficial facility of appereception which throws together the most heterogeneous elements,—that precipitate judging peculiar to uncritical minds. There may be in such apprehension a certain correctness; but since the similar and the opposed, the false and the true, are not sharply distinguished, the appereception is either precipitate or entirely false. Where, on the contrary, strong, disciplined thought weighs carefully that which is to be brought into relation with the new; where clear, studied, and well-united groups of ideas come into contact with it, there the appereception will often be slow, but it will be completed so much

the more correctly and certainly. Then, as a rule, it is not at all necessary that the appereceiving mass of thought be reproduced in its full extent and content, but it is sufficient that the conception, the law, the principle, stand in consciousness. The latter represent all the related ideas that make themselves felt as unconscious co-operating elements in the course of apperception.

We saw that to the subject of apperception belong also the obscure psychical conditions, the feelings and obscure notions, that accompany the appereceiving ideas. This shows us what significance the whole mental and emotional condition has for the course of mental assimilation. Dominating states of mind that have no internal relation to the object of apperception, secret care and anxiety that disturb the spirit, may also prevent the strongest aids to apperception from rising, thus making their force ineffective. In the life of every person come hours in which, to his own surprise, he maintains an unimpressionable and indifferent attitude towards the most interesting events and facts. A certain bodily and mental tranquillity is then necessary to re-establish the equilibrium between the various psychical elements, if an unbiased apprehension of the new is to follow. Yet more: our inner life with all the feelings and inclinations, with the secret impulses and interests, which at the time stand above or near the threshold of consciousness, must receive a uniform impression, and this world of thought and feeling in which we live must be related to the content of the new; in a word, the right mood must dominate. Then consciousness will be occupied with ideas that will ward off disturbing thoughts and efforts, and, by reason of their uniform tone of feeling, will greatly facilitate the reproduction of the right aids to apperception. The sphere in which the latter are to be sought approaches consciousness,

and every element of its content may become a beginning member of a series of reproduced ideas. Finally, when important individual members of these related products of consciousness rise especially high, anticipating the perception; when a certain tension of the sense organs precedes the expected impression, and an increased power of attention is felt, then the favorable condition is present in which apperception may take place — the condition of expectation. Many spiritual arms are stretched out to receive that for which we are prepared, so that we assimilate more easily and more accurately than when surprised by a new experience. We have now reached an important factor that is always present in active apperception, viz., the *will*. That a perception or a memory picture may be expected, or the mind incited to a fundamental apperception, it is often necessary to have a vigorous action of the will, in addition to appropriate emotional states of mind. The will holds the perception firmly in consciousness until it is rightly recognized and understood. It controls the desires and feelings that affect the mind, so that the right helps to apperception may appear. Without an exercise of will the attention would soon flag. The reason that among men a failure to understand is so frequent, and that all new and epoch-making doctrines find so slow and so difficult a recognition, is, to a considerable extent, due to the want of good-will toward these subjects. This has been experienced by all great men who have been in advance of their time. This was experienced even by the Apostles of so victorious a cause as the gospel of Christ. Let us think of the foremost among them, Paul, the great Apostle to the heathen. Few teachers have been so inspired and have preached the new faith so impressively as this chosen warrior of the Lord. How admirably he knows how to arouse apperceiving ideas in his hearers;

as when, for example, he reminds the Athenians of the unknown God, to whom they have unwittingly erected an altar; of the splendid temples in whose halls the gods were to abide; of their poets who sang of the divine origin of man. If, notwithstanding, his sermon found entrance into but limited circles, and was not understood by the great mass of Jews and heathens, such unbelief was not founded merely in the nature of their mental and emotional life. The Athenian pride of culture would not learn from the despised Jew, the legal pride of the Israelite would not accept any innovation, while in other places (Ephesus, Antioch, etc.) self-interest and envy closed the door of the heart to the gospel. Custom and inclination, desire and passion, and not least, indolence of will, very often make a man incapable of recognizing and receiving new truths. The intelligent assimilation of strange truths, the transformation of one's own conviction, demands not a slight degree of mental exertion and force. In this case, to apperceive means to undergo victoriously an internal struggle. Such a mental struggle cannot be easily understood, however, by one whose heart is already bound up in other interests than those of the investigation of stern truth, by one who, on no account, will allow himself to be disturbed in the secure possession of an acquired good or an agreeable habit. Here the will does not determine the opinion, but the wish is father to the thought. Hence that which is regarded as lack of intelligence is not infrequently a defect of the will. To apperceive impartially and thoroughly, despite inclinations and wishes, at least in the spheres of science and ethics, is at bottom a moral act, and the prerogative of a strong character.

Side by side with the psychical conditions, as they were presented above, must not be overlooked those physical pro-

cesses that are connected with the former, and that in the process of apperception prove not less effective. It is highly probable that all our mental activity is accompanied by corresponding nerve excitations; indeed it is probable that a great part of our ideas would not be present without them. We are thinking not merely of the rise of sensations, in which that fact has for a long time been generally recognized, but we are thinking also of the union and reproduction of ideas. The oftener, however, a nerve-current is called into exercise, so much the easier is the transmission. An effect remains from every excitation of the nerve and its central station, the ganglion cells, which puts the current into a condition to follow a renewed excitation more easily. Such "functional tendencies" towards the renewal of an excitation are of great significance for the course of apperception. If a similar idea enters consciousness, it will, by virtue of a remaining tendency, or disposition, renew an earlier similar nerve-excitation, and thereby facilitate the return of the psychical product corresponding to it, — that is to say, the apperceiving idea. The functional tendencies of nerves made active according to the laws of relationship may, according to this, conduce essentially to the awakening of such ideas as hasten forward as aids to our apperception. And it is clear that the apperceiving activity within definite spheres of thought must be perfected the more surely and speedily, the more the corresponding excitations are exercised in certain nerve currents by frequent repetition, and the more undisturbed they decline. These functional tendencies attain special importance in the apperception of an expected sense impression. Then related ideas stand in consciousness, which are accompanied by the same physiological occurrences, though perhaps in a less degree, which once preceded their formation as physical condition and

cause. These advancing excitations of nerves and nerve-centers on the ground of acquired functional tendency, do not contribute as motor irritants to the intentional cessation of the action of sense organs, but they strengthen the expected sense-excitation and help it to apprehend more quickly. We become conscious of how much our bodily organs are concerned in the progress of apperception through the sensations connected with it.

In certain nerve activities essential conditions are given for the delay or prevention of an apperception, as well as for its successful and rapid completion. It is a fact that, after heavy, tedious illnesses which leave behind a general weakness of the body, and especially of the nerves, the duration of the apperception is particularly long. The same is true when one is in a condition of fatigue. As is well known, the blood continually brings to the nerves nourishing matter, which there undergoes a chemical change. The strength and quickness of this change are in proportion to the vigor with which the nerves are set in action through bodily or mental effort. The continuously flowing blood takes up those products of the change which could not be used in the future, and replaces them with new material. If, in consequence of long and difficult labor, the outlay is greater than the blood is able to replace, then arises that condition which is known as exhaustion. In this condition we feel our mental activity arrested to a significant degree. Notwithstanding the great effort of the will, and even with the presence of psychical conditions favorable to apperception, the assimilation of new perceptions, or ideas, will be completed but slowly and imperfectly. Indeed, it may be entirely omitted, if, in consequence of a lasting or transient disturbance of a nerve current, the corresponding physiological action is not accomplished, as when we say,

“The nerves no longer act together.” We then become actively conscious of how much the activity of the soul is dependent upon the co-operation of the central excitations and nerve-actions, since to attempt to do without those would be as vain as to attempt to play upon an instrument without strings.

3. SIGNIFICANCE OF APPERCEPTION FOR THE MENTAL DEVELOPMENT OF MAN.

Our text-books on psychology usually treat the subject of apperception in connection with that of internal perception, after sense-perception, reproduction, memory, imagination, the ego, and even judging and reasoning have already been treated. This might give rise to the idea that mental assimilation takes place rather late in the development of mind, and that it is limited to a definite epoch.

This opinion has actually been voiced in a very determined manner. It has been denied that apperception belongs to childhood, or to the school period of life, the claim being made that it is confined to the age of reflection. But those who say this, overlook the fact that passive apperceptions occur even in earliest childhood, and that the idea of apperception cannot be limited to the cases of intentional assimilation of new impressions. If apperception means the grasping of new ideas by the aid of present similar ones, if it is the process of growth of the soul, then it belongs not only to one, but to all epochs of the mental development of man; it must play a very important part in the sphere of inner growth, during the whole of life. Let us try to comprehend the significance of apperception in the mental development of the individual.

The first great task proposed to the child's mind is that of learning to find its way in the world of perceptions;

to master the world by learning to know it. It does not solve this problem in a strictly systematic manner, contemplating, closely it may be, one object after the other, and thus, proceeding gradually according to a definite plan from the parts to the whole. That is by no means possible. Perceptions, as a rule, come in masses and are too transient to give the child a chance to devote his particular attention to each one of them. Besides, he is not able to apprehend them sharply and correctly, owing to the imperfection of his senses and the poverty of his knowledge. And even if he were able to do this, it would be very impracticable to try to devote to all sensations the same sense-energy and attention. For, as the child is mostly occupied with more than one object, his perceiving and knowing would for a long time lag far behind his practical needs, and would never correspond to them. The child, on the contrary, takes possession of the outer world first as a whole, by being for the present satisfied with an obscure general impression. From this he gradually selects and grasps the important elements one by one. His choice is not determined by logical reasons, but by his practical needs as determined by circumstances. Those objects and events which, as conditions of life, lie particularly near to the feelings and desires of the child (food and drink, lodging, dress, parents, etc.) or excite his interest in a vivid manner, are preferred above all others. When the remaining component parts of the total perception, at least for the time being, reach only the general field of consciousness, the preferred objects rise to the focus of consciousness.¹ Thus by degrees several clearer percepts rise out of the confused manifoldness of obscure general impressions; the child

¹ See Wundt's Theory of Apperception in the present volume.

gains a number of fundamental ideas that are mostly characterized by great activity and powerful tone of feeling.

For these perceptions are not heaped up like dead treasures, but almost as soon as acquired they become living forces that assist in the assimilation of new perceptions, thus strengthening the power of apprehension. They are the contents of the soul that now permanently assert themselves in the act of perception. For wherever it is at all possible, the child refers the new to the related older ideas. With the aid of familiar perceptions, he appropriates that which is foreign to him and conquers with the arms of apperception the outer world which assails his senses. Thus, for instance, Steinthal,¹ from his own observation, relates of a two-year-old girl, that she called the picture of spectral forms of women with long floating garments "birds," cornstalks "trees," swimming swans "fishes," and mistook a flag that floated from the top of a house for a "white horse." Something similar to this is told by Lazarus of a child that had been brought up in the South; snow-flakes, for instance, that he saw for the first time, he called "butterflies." And who does not know from his own experience how the child at first considers every man his "pa" or "daddy" or "father," every flying creature as "bird" (or whatever else the expression of the little ones may be), every plant as "tree"; how he apperceives the lightning perhaps as a fiery swallow, the clouds as mountains, the lights in the windows of a distant house in the darkness of the night as "peep eyes." Such false or limited apperception is peculiar not only to early childhood, but it asserts itself also later on. Let us listen to the report of an attentive observer of six-year-old children, who visit the zoo-

¹ *Abriss der Sprachwissenschaft*, p. 158.

logical garden for the first time. There is so much new presented to them that they are unable to carry away clear ideas of what they have seen. They must master the new impression as well as possible under the circumstances. And thus we are told that the little ones regarded the buffalo and aurochs as ewes, ibexes and chamois simply as goats, the rhinoceros as an elephant, while they loudly and joyfully greeted the tiger with "kitty, kitty!" The ostrich was to them a big goose or a stork; smaller exotic birds they called finches (for these birds had often been observed on class excursions); beavers, first mice, then fishes or frogs; and the seal was after long deliberation classified as a fish, but one "from another river."¹ Here we have by no means merely witty comparisons, as perhaps an adult would jestingly try to make, no toying with ideas, but earnest work of the child, who in his manner seeks to understand strange new impressions. He does not compare merely, but he straightway identifies the new with the familiar. According to a law of the mind that cannot be further derived, but only settled as a fact, he must work thus, if by degrees he is to change from a slave to a master of his external perceptions. In accordance with his mental nature, he cannot but practice usury with the acquired capital, he must assimilate new ideas with the present ones. The latter become the organs of the perceiving soul with which it grasps the manifold world of perception, articulates it, arranges it in accordance with the present store of ideas.

Language ²in this connection renders important services

¹ Lehmensick in *Just's Praxis der Erziehungsschule*, 1888, part II, p. 75.

² That the learning of the language is itself an apperception-process, Lazarus has shown in his *Life of the Soul* (third edition), II., pp. 168-173.

to the mind. It is true that apperception is possible also without it; as, for instance, the child in the two first years of his life refers throughout the new to the old, without always having a corresponding word at his command. But still apperception proceeds more surely and more easily, when the fundamental ideas are fixed by language. The name separates each one of them from other notions and holds it fast in memory, so that the ideas gain in clearness and liveliness, and can more easily assist in the acts of apperception. The word unites similar perceptions, holding them together in groups and enabling them to unite with the fundamental idea. Applied to new contents of consciousness, the word is an expression of accomplished apperception.

The word does indeed in certain cases rather hinder than further a right apperception. If it is a name, for instance, that belongs to a certain fundamental idea exclusively, if it signifies an individual, a single phenomenon and only this one, then the word does not form a far-reaching roof under which other related perceptions also can find a place, but it coincides merely with the apperceiving idea. When other perceptions are now joined with the latter, they of course having also their own names, the individual name is used as a generic name, so that the new idea is incorrectly named. (It is indifferent whether the child received the name from others or whether he formed it for himself.) A few examples may serve to illustrate this. "A child that was beginning to talk, saw and heard a duck on the water, and said 'quack.' After that, he called all birds and insects, on the one hand, and all the fluids, on the other, 'quack.' At last he called also coins 'quack,' after having seen the image of an eagle on a French sou. Thus, through gradual generalizing (?) the child went so far as to designate a fly, a coin

and even wine by the same onomatopoetic word, although only the first perception contained the name-giving characteristic."¹ Such an extraordinarily superficial apperception can occur perhaps only in the first months of life, yet similar processes repeat themselves regularly also in later years. When in all earnest the child at first gives to foreign mountains, rivers and creeks the names of his native place; when Schiller, for instance, as a little boy declared all rivers of his native state to be "Neekars," or another three-year-old boy who had before that seen from his window daily the Syra creek, called the river near his home, upon seeing it for the first time, "Elstersyra," — here as in many other instances we meet with restricted apperception, *i.e.*, an apprehension where the most varied observations are with the aid of a name traced back to certain individual ideas. The child will certainly correct his apprehension later on; he will frequently have to unlearn. But this drawback is not serious when we consider the fact that he is really appropriating the new and making it subject to himself, that he is learning to rule the impressions of the outer world. Besides, there is not much to be done against such a restricted apperception, at least not in early childhood. It corresponds to the nature of the child's mind, and is mostly performed without the knowledge or assistance of the teacher. It does not even appear advisable to give to the child from the beginning the corresponding word for every new perception: he would not be able to remember all the names for the multitude of external impressions. But, where confusion is likely to result, some persons would meet the child's urgent inquiries for the names of things in another manner: in the earliest period of development they tell the child the generic name of many ho-

¹ Preyer, *The soul of the child*, I. E. S., Vol. IX., p. 90.

homogeneous objects, and not that of the individual or the species. They speak to their little ones, not of the birch, oak, linden, pine, fir, but of the *tree*. For the swallow, the finch, the sparrow, the starling, the name *bird* or a still more childlike expression is for a time sufficient. In this case the name of the apperceiving idea presents a far-reaching roof under which numerous related perceptions may collect; the child transfers the generic name to similar notions that really belong to it, so that unlearning will not be necessary later on. Homogeneous perceptions unite most easily to a single indefinite idea, which manifests all that was common to the former, but without the distinguishing characteristics, and which therefore presents a silhouette rather than a picture of the objects. A general idea, or picture, arises, with whose aid related things or events are apperceived. As the child, however, gets into the habit of tracing back a great number of homogeneous perceptions to relatively few generic names, he makes a very important advance. "For, first of all, the infinite variety of outer and adjacent things that come to meet the attention of the mind and threaten nearly to overwhelm it, is so greatly simplified through the combination of the whole series of individual ideas into relatively few general pictures, that even the less vigorous child-mind can soon manage to find the way through it. Then, however, a substantial preparation is made for conscious thinking proper, through this formation of general ideas, and its material is brought to the mind not in crude, sensuous directness, but already logically prepared in some degree."¹ Finally, the child is enabled with the aid of his general pictures soon to follow the linguistic intercourse of adults with understanding, and also to take part in it.²

¹ Pfisterer's *Paedagogische Psychologie*, p. 95.

² If country children on entering school have less power of expression than city children, the reason for it is to be found, not only in the

The fact that the child with the aid of fundamental ideas or general impressions intellectually conquers a great part of his environment, has given rise to the opinion that man perceives first the general, the genus, and then proceeds from this to the cognizance of the particular, the single thing.¹

That is just as erroneous as the current assumption that he proceeds from the species, in order to elevate himself gradually in a strictly logical manner to the genus. It is not with the naming and discerning of the species that he begins to ascend regularly to the genus, but with obscure and general impressions that are mostly held fast and connected temporarily by a generic name. But as little as the word is identical in meaning with the idea it signifies, so little does the generic name contain the cognition of the general, the rational. It includes, on the contrary, for a long time many similar ideas, from which later a conception-content is first gained through discernment of the species. The seeming conception of the general first awakens only the

want of exercise in speaking, but also in the circumstance that they have not learned as many expressions for the general notions current in the family conversation, and therefore cannot express themselves as readily as city children who have grown up in the midst of a more lively intercourse. But the apperception of the country child is often the more vigorous and original because of this fact.

¹ Compare Sigwart's *Logic*, I., p. 49: "Quite contrary to the common doctrine of the formation of concepts, the general proceeds the special with individuals, as it does in language, just as an incomplete idea precedes a complete one, the latter presupposing more far-reaching discrimination." According to this, S. looks upon the indefinite apprehension of the child as a logical activity that selects from many perceivable characteristics the essential ones. But that is not the case. It is a result of a psychical impotency, not of a logical capacity. That man descends in the course of his mental development from the general to the particular, can be admitted only as far as the name is concerned, not with reference to the contents of the developing thought.

generic name, which is made use of for psychological reasons. We have at first not general, deeply penetrating thought, but rather a somewhat indefinite perception.

For it is undoubtedly true that the facility of apperception in earliest childhood necessarily results in a merely superficial or rather one-sided apprehension of things. So long as the child must trace the most varied perceptions back to a relatively few fundamental notions or general impressions, so long will he have no regard for an all-sided observation and keen discrimination of single objects. It is sufficient for a time that he grasps one or the other characteristic of the latter clearly, thus holding fast the idea. Often even this is lacking, and he retains only an obscure sensuous impression, especially when the name was offered too early. Such wholly or partially empty word-shells often fill themselves later with the right thought-content; often, however, they assert themselves unchanged in consciousness. Thus the child tells his playmate, perhaps with triumphant pride: "Our house has got a mortgage on it and yours hasn't," thinking that a mortgage must be something wonderfully fine and excellent; or it happens to him as to the Berlin market-woman who called her colleague a "confounded differential tariff" with the intention of saying something very hurtful. Makeshift apperceptions, *i. e.*, assimilations without sufficient or correct apperception aids, arise, which are always equivalent to misunderstandings. Then it may happen, to quote a few examples from life, that the child understands by "dressed beef," beef in some sort of apparel; by "guardian," a person who takes care of the garden; by "salon," a liquor shop; and forms such words as "exercise clerk" (excise), "upper glass" (opera). In short, as the child is lacking in a rich, logically formed sphere of thought, he fails to grasp the objects of

the external world in a manner strictly objective, but apprehends them subjectively; he sees them in the light of his limited experience, his feelings and inclinations; he asks more for the worth they have for himself (for his ego) than for their meaning. To this then corresponds also the real or imaginary intercourse that he has with them. As he now sees no difference between body and soul, but looks upon the feeling and desiring, the acting and moving body as his ego, so he conceives also his relation to outer objects in a very childlike manner. He apperceives them with the aid of his idea of himself, *i. e.*, his ego-idea. As his body evinces life in arbitrary motion, he adjudges personal being to all that moves really or apparently of itself. For to show life and motion is to him identical. He places external objects on one and the same stage with himself, and ascribes to them his mental states; he looks upon them as sensitive and volitional beings.¹ Hence the lively interest of the little ones for animals and plants, the affectionate intercourse with them, the understanding they have for their real or imaginary conditions. Hence the sharp ear of youth for the language of birds, which they, "happy in their unconscious wisdom," apperceive after their own poetic fashion.

When, however, the child thus ascribes his own mental states to outer things, when in early years he discovers so many new and mysterious things in nature, everything may appear to him in the vagueness of the fairy tale; at any rate, his apprehension will not be sober and clear as with adults.²

¹ A child not yet two years old, said pityingly on seeing the dripping plants: "Tree cry, cry — oh"!

² This explains also many strange and almost marvellous incidents of the days of our childhood. A friend of mine told me, for instance, the following incident of his boyhood: "Close to our house, near the limits of the village, were the grassy plains of the Elster. There was a bowling-alley, and on one of its sides grew weeds, celandines, nettles, thistles, and

We comprehend how the child builds up for himself such a world of fancy also in playing; how the boy can have intercourse with his wooden horse for hours as with a trusty and intelligent playmate; how the little girl can nurse her dolls in full earnest with a truly touching tenderness. We understand also the great joy, the lively interest with which they both listen to the fairy-tales of the mother. For those are tales that lead them into their dearest thought-regions, stories that they anticipate with their whole world of perception and feeling.

Thus, early childhood is the great harvest time in which the child apperceivingly takes possession of the outer world in its principal traits with the aid of fundamental notions and general impressions; but just because he always refers the new to the old, he grasps it very one-sidedly and subjectively. It is the time when he prefers to have a fanciful intercourse with the outer world and to meet a fanciful apprehension and representation of it with a peculiar understanding and a lively interest. Finally, so far as his relation to the mental, the religious, the moral world is

dandelions, in exuberant profusion. This place, whose damp ground was hidden from the rays of the sun, had an uncommon charm for me, as I imagined behind its wildly entangled world of leaves marvellous things of all sorts. I always went with a feeling of awe, and yet returned with the hope and premonition that I should there discover strange things. One morning the dew still sparkled on the beautifully formed leaves of the lady's mantle (*alchemilla*) of which I was very fond, and to which my father to my chagrin had given the very prosaic name "goose slipper." Everything had an enchanting interest. Just then a big green frog with eyes that glittered like gold ran toward that chaos of leaves. The solitude of the place, my own lively feeling, made me see in the frog a little mannikin dressed in a green glittering gown. Often after that I tried to see the same again or at least to spy his little house." When the same boy, at the age of six, came for the first time to the city, he mistook the red glove at the sign of the glove-maker for the bloody hand of a giant. The red, glistening wheels of a locomotive appeared to him fiery and glowing.

concerned, his apperceiving ideas prove themselves here also to be standard and determining factors. To them belong in the first place the ideas that are associated with sensuous feelings and aspirations. For even if, in the intercourse with nature and men, nearly all feelings and interests awake in the child, such as interest for beautiful forms and moral judgments, sympathy for the welfare and sorrow of others, and joy in intellectual activity, we may still assert that during the time when the child yet identifies his ego with his body, the sensual feelings and desires predominate in him. They very often influence his moral judgment regarding his own conduct or the actions of others, so that he looks upon that as right which is pleasing to him, and that as bad which he fears. Is that man or that animal good or bad?—This oft-repeated question of the child frequently betrays more sensuous interest than ethical feeling. And thus for a long time the sensuous would prevent the ethical from asserting itself rightly, and would control the juvenile soul exclusively and absolutely, if from the beginning, under normal conditions, another important sphere of thought did not meet it, and hinder and restrain it; namely, the world of ideas that clings to the child's ideal picture of his parents. Here also the sensuous feelings and desires do, to be sure, often assert themselves. For, why does the picture of the parents stand so vividly before the soul of the child? First of all, most likely, because he sees himself bound to them with his whole being, because they are the source of his well-being, because he receives reward and punishment from them. The reverence for father and mother is at the beginning very closely united with the sensuous feelings of fear and dependence. But these sensuous feelings and relations that give so high a motive-worth to the picture of the parents for early child-

hood, are, at the same time, just because they are awakened by ethical personalities, always indissolubly united with the intimations of the high ethical worth of the parents, and the ethical order of the world which they represent. That father and mother are more than mere supporters, powerful authorities, soon dawns in the consciousness, even if only in an obscure feeling. And thus the dominating idea of the parents includes both a sensuous and an ethical total of feeling, and that too in such close connection that it would mostly be very difficult to determine where the one begins and the other ends. This ideal picture is to the child that grows up in happy, honorable family relations, the embodied morality, the model of all that is good and right, the living conscience. Wherever a moral judgment of the worth of the disposition of others, or a decision in a matter of his own conduct is to be induced, the question that lies nearest to the child is: What do father and mother say about it? Who has not observed one of the little ones in such a state that he is not sure how he is to regard his own action or that of another? He looks inquiringly from father to mother, to read in their countenances the right, and when they give an unmistakable and clear answer, then his ethical judgment is decided at once. When he has done wrong, he avoids his parents: he shuns their look and sight, he shrinks from the thought that makes his conduct appear wrong and punishable. Thus, where the sensuous world of thought and feeling does not assert itself exclusively, the unspoiled child apperceives sentiments and actions mostly through the ideal he has of his parents, which stands before his soul as an ideal or pattern. It is also through his ideal of them that he gradually gains a notion of God and of right inner relations to him.

Let us accompany the child further, to the next stage of

development, which reaches about from the seventh to the tenth year. The child enters upon the boy and girl age: he goes to school. The world of his previous experiences may be said to enter with him into the little school-room — for in that sphere of thought does early instruction mostly move — and is met by a new, strange world, one that lies beyond the limits of the home. But the objects of perception do not continue to assail his senses in masses and without plan; they come before his eye in a regulated procession, set by the teacher's art into narrow frames that separate them from each other and make their careful contemplation possible. Hitherto the child has given himself up, in the free play of his fancy, to outer impressions, letting himself be guided by them; now he is to absorb those perceptions in earnest labor and to make them serve his purposes. Hitherto he was accustomed to jump from one object of interest to another and to follow the direction of the strongest sense impressions; now he is to learn to fix his attention and to direct it for some time to certain objects of instruction, and to repel disturbing excitations of the senses. He does not always succeed in this unaccustomed "concentration of consciousness." Often he stands dull and indifferent before the objects that he is to view, and which the teacher believes to have been well-chosen and well-presented; he looks, yet perceives nothing; he talks about the things and yet does not really grasp them; they remain indifferent to him. Attention then quickly flags. At another time, he cannot gaze long enough to satisfy his desire: he is all eyes and ears, and he departs from the object of his attention with regret. It has bewitched him, because he has been fond of it from childhood, or it has received peculiar illumination. Thus, it is not the excitation of the senses which here holds the

attention, but the great number of appereceiving ideas that were awakened by the object observed. These ideas often invest the newly entering perception with so strong a motive-worth that the will springs forth and holds fast in consciousness what at the beginning was noticed only involuntarily. With the aid of the will, the mind of the child grasps new experiences in the light of past ones.¹ And, therefore, even here we cannot yet speak of a complete, purely intellectual, apprehension of external objects. To be sure, it becomes, especially in consequence of instruction, gradually more correct, more varied and clear: still, it is yet so closely united with subjective notions that it may be considered, on the whole, a fanciful apprehension of nature.

Not always can the objects of which instruction treats be presented to the child *in natura*. Pictures then take their place. It is commonly supposed that they produce much the same impression as the real things. But that is the case

¹ An incident from school-room practice may serve as an example. The teacher speaks with the little ones of the first school year about the sun. After having attended to the necessary observations, he wants to make them understand that the sun shines, warms, is in the sky, and is created by God. The teacher does his best to make this clear to the children—he finds it impossible. They repeat all that he said, but it seems as if it were so strange to them, that it must be uttered without their really believing it. Then a child drops the remark: “The sun is God’s lamp.” Immediately the conversation receives an entirely new impulse. Numerous ideas awake and press to the front, thus placing the object in the right light. Now the children see God light his lamp, as it were, early in the morning, so that his children can see during the day; they see him blow it out in the evening when all go to bed, or turn it down when it is dim. That the sun shines as the light of heaven, that he brightens all and gives us light to see our work, that darkness covers the earth when he ceases to beam—this and much more is now clear to the child, and has become his mental property. In a very childlike form, to be sure, but when the little ones cannot grasp the objects of the outer world in other than a fanciful way, why not let them do so in this manner?

only under certain conditions, for even the ability to understand drawings or to interpret pictures is an acquired power. The eye sees in reality only surfaces and outlines; of itself it knows nothing of solid bodies and perspective. That is proved by the statements of those who, having been born blind, have later received their sight. They at first regard paintings simply as colored surfaces, without the least thought of perspective, or of the solid bodies thus represented.¹ When we understand drawings and interpret pictures, we do it largely with the help of the ideas we already possess: we fill in the outlines until they become objects; we lend life and feeling to the dead forms; we put our own thoughts and emotions into the variegated world of pictures. And the more or less we are able, in this way, to put in, the more or less do we read out in return. So it is also with the child. Even though he may early have had practice in the comprehension of the simplest sketches,² still he understands a drawing only to the extent that he has already seen and experienced something similar. Whenever the picture goes beyond his range of observation, beyond his experience, he does not see what he should, even though he have the best of intentions. For all comprehension of pictures is an apperceiving, a grasping and interpreting of them by means of strong and clear ideas which we have already secured from real objects and events.

A majority of the objects to be studied in school cannot be presented *in natura*, neither can their pictures be ob-

¹ Preyer, *Die Seele des Kindes*, pp. 466, 484.

² My oldest little girl, even at the end of her first year, designated the leaves and tendrils upon the window-curtains as *tree*. When, in her twenty-second month, I laid before her one after another the photographic pictures of Juno Ludovisi and of Zeus from Otricoli, she immediately called them "Mama" and "Man" (or "Papa," "pretty Papa").

tained; many others also cannot be perceived through the senses at all. The child is then compelled to look within himself for the means of apperception. "Instruction can thus impart only words; the ideas for which the words stand, and without which they could mean nothing, must come from within the child himself." "Most of the process of learning consists simply in *understanding words*, i.e., the pupil, by means of the mental store which he has already collected, puts meaning into the word she hears."¹ Hence every lecture, every narrative, every question of the teacher, is a demand upon the pupil to connect the word, which in itself is meaningless and empty, with concrete notions or thoughts already in his possession; they each require the reproduction of old ideas which stand in close relation to the subject of instruction. Thus pupils think and feel what is peculiar to themselves² every time they are taught anything, each in his own individual manner according to the fund of knowledge at hand.³ "But it is these hidden thoughts and feelings, running quietly along beside those of the teacher," that explain the words which are heard, and fill them with a concrete living content; they form the background upon which the *new* rises, clear and sharp; they are the apperceiving force by the aid of which the new is made intelligible.

For instance, if a pupil is to follow intelligently an historical

¹ Herbart's *Pädagogische Schriften*, published by Willmann, Vol. II., pp. 541, 605.

² Hildebrand, *Vom deutschen Sprachunterricht*, 3d edition, p. 54.

³ Compare also the following from Emerson: "What can we see or acquire, but what we are? You have seen a skillful man reading Virgil. Well, that author is a thousand books to a thousand persons. Take the book into your hands, and read your eyes out; you will never find what I find. If any ingenious reader would have a monopoly of the wisdom or delight he gets, he is as secure now the book is Englished, as if it were imprisoned in the P'elews tongue."

or geographical lecture, the first essential condition is that he be able to give to what he hears a definite concrete basis, to transport himself easily into distant times and places. But how can that come about? If we examine closely to see where our thoughts wandered as we, in our youth, for the first time, heard the story of the beautiful garden of Eden and of the first human beings; as we marched with the Israelites through the Red Sea and encamped upon Mt. Sinai; as with Moses we looked from the heights of Mt. Nebo into the promised land, where flowed milk and honey; we make the surprising discovery that it was at our own home with its valleys and mountains, where our thoughts dwelt; that we transported the woods and fields of grain, the deserts and fertile plains, the houses and wells, the men and animals of sacred and profane history to our own neighborhood; and, while we were travelling in distant countries over sterile land and mountainous regions, over seas and rivers whose names had never before sounded in our ears, we were nevertheless all the time at home; we pictured foreign places clearly by means of those with which we were already familiar. One is likely to be reminded, by this fact, of the imaginative faculty, and to rejoice over its great activity among children, who can so easily bring the most distant objects within their horizon.

But it is insufficient to refer a process to a special and wonderful faculty, when it can be explained much more naturally by a universal law of psychology, and shown to be an entirely normal and necessary phenomenon of mental life. When we transported ourselves into an unknown and distant region of Bible History, or rather created it in our minds, there came to the help of the new names certain familiar and similar notions; namely, the names and images of objects at home. The names of sacred places, the ideas of persons and events in sacred history, called up related groups of ideas (*i. e.*, those

produced at some time by the immediate environment) and united with them, until the two became thoroughly fused, and formed a single group. Thus the new part that the narrative contained was interpreted and digested by the help of ideas already in our possession; and we must therefore credit apperception with that which is usually ascribed to the activity of the imagination.

Bogumil Goltz, who is so well acquainted with and appreciative of child life, describes such childish apperception in a very attractive manner. When for the first time, to his great joy, he came into the possession of a variegated woodpecker, brilliant in all colors, he imagined heaven to be a wood and meadow in which there was nothing but tame woodpeckers, which could be taken up by the angels in their hands (*Buch der Kindheit*, 3d edition, p. 42.); likewise, later, he was accustomed, by the aid of his home experiences, to picture concretely each city and country under discussion in Geography and History. He says, "I saw especially Jerusalem from the beginning always in the same light, the natural scenery, weather, time of day and year remaining the same; the streets were unpaved, but fabulously wide and composed of hard, sandy soil; the houses were low and comparatively large, being separated from one another by spacious yards; an indescribably dreamy quiet rested upon the whole; there was no work, no manufacturing, no police, no trading; all was in a state of pious, contemplative reflection in the observance of the Sabbath and the worship of Jehovah."

At Easter when the snow was melting and the streets of Königsberg were flooded, "when all the fields far and near were covered by a countless number of lakes, and all the granaries and houses appeared in the water like a northern Venice, I had a view of the first waters and the

flood, of Noah's ark, and all of Genesis besides; I then reviewed in mind and sense all the diluvian and ante-diluvian stories, and the days of ereation."

The author of this book cannot refrain from adding to the interesting reminiscenees of this friend of ehildren a few from his own youth. He was accustomed, just as Goltz, to reach a clear understanding of the facts of saered history by associating distant localities and events with those at home. When, for example, the story of the ereation was studied in school, his ehildish fancy pictured chaos to be similar to such a flood as was often caused by the Saale river at a certain place, in the eentre of which was a pond surrounded by gloomy linden and willow trees. The mist that arose from the water mornings and evenings was the Spirit of God that hovered over the waters. On the shore of the Saale where there were many reeds, Moses was exposed in his little basket, while his sister in a neighboring field watched the fate of the little fellow.

From the same stream arose the seven fat and lean kine of Pharoah; at the point where it was partieularly deep, the Israelites marched through the Red Sea; there the Egyptian army was swallowed up by the returning floods. Mt. Parnitz, rising rather abruptly on one side, appeared to me as Mt. Sinai on which the law was given amid thunder and lightning, and at its foot the people of Israel were eneamped in the desert (though fertile) valley of the Saale. The same meadow in which the Lord appeared to Moses in the burning bush saw also the shepherds of Bethlehem tending their flocks on Christmas night, and heard the song of the heavenly hosts. I remember still more vividly the dark, old stable—it has long since been removed—upon which I fixed as the birthplace of the Saviour.

When the temple of the Jews was mentioned, I brought to

mind our village church; there the aged Simeon sang his song of praise, and at the altar, where each year the examination of candidates for confirmation was held, the twelve-year-old Jesus disputed with the learned scribes. The town-hall was first the prison, then Joseph's dwelling; the royal palace (a large inn), in which he interpreted the dreams of Pharaoh, stood opposite it facing the public square; and the house of Potiphar was on the same street. Joseph's brothers passed along this street and stood trembling at the door of the town-hall as they were to answer for the theft of the cup; and here also was the spot on which the brothers recognized each other with much emotion. The dwelling of the high priest, Caiaphas, was a spacious building, the guardhouse, whose large hall was formerly occupied by sessions of the court; Jesus was brought there, and in the entry Peter denied his Lord. Naturally enough Pilate lived just opposite to the high-priest's palace. As I thought of Christ's cross as standing by a garden-wall upon the brow of a hill, so I imagined His grave to be in a certain yard near by. But the road from Jerusalem to Jericho led along past the cross, for the man who fell among thieves went *down* towards Jericho. A few steps distant, in a wide path with some gardens on either side, lay the stone upon which Jacob laid his weary head, as he was fleeing into Mesopotamia. Then came the place in which I had located the garden of Paradise. Adam and Eve wandered about in it; in the centre stood the tree of knowledge, and the guilty couple fled behind yonder bush when God reminded them of His commandment. From this point one could see the Galgenberg, where Cain slew his brother; the Birkenhain, where Isaac was to have been sacrificed; and in the distant horizon Mt. Nebo appeared, from which Moses looked over into the promised land.

These recollections show that the child's conception compresses within narrow bounds many facts that are widely separated in time and space—a truth which is entirely in accord with the limited circle of ideas that he brought with him into the school. To be sure, it must be admitted that an understanding of some of the stories was not acquired in the best way, that the Bible pictures received a local coloring and many non-essential and incorrect characteristics.

But all these defects are counterbalanced by the single fact that the new knowledge was apperceived with certainty, that the words of the teacher did not remain empty, but produced brightly colored, living pictures in the child's mind. It is related of Byron, that his conception of the classical regions of the Homeric poems, which he secured by viewing them in person, was far inferior in impressiveness and beauty to that which he had already formed of those places by the help of his home environment. Thus we see that, at times, apperception may be so vivid that it at least equals perception in the clearness and force of ideas. But whatever the childish mind has once created so unconsciously—for of course reference is not here made to any conscious seeking on his part after corresponding pictures from his environment—has impressed itself too deeply upon him to allow reflection at a later time to alter and correct everything. Of course by means of illustrations, descriptions, and study, one's youthful apperceptions may be corrected; but when I examine carefully to determine which mental pictures rise into my consciousness involuntarily, first, and most readily, at the mention of the Garden of Eden, Golgotha and Jerusalem, I find that they are my earliest notions, and that later knowledge has succeeded in changing them but little.

An historical narrative or geographical description requires of the pupil not only a vivid representation of distant places, but also a clear idea of strange customs, of strange persons and their experiences, their thoughts and emotions. Here again the child must look within himself in order to fill the words that are heard with a concrete meaning. This happens when he looks back over his own experience, such as his home in the main has furnished him, over the subjective and objective events of his life, and by their help transports himself into historical times and conditions, among strange customs and usages.

The more scanty and inadequate these apperceiving ideas are, the more defective and *naïve* will be his comprehension of the newly acquired information. Misconceptions are certain to occur, as when one boy thought that God made Adam out of potato-dumplings, and that the Angel of Paradise held a large *Schwarte* (*i. e.*, board, instead of *Schwert*, meaning sword) in his hand. Or the apperceptions are altogether too childish, as when a pupil thought that Jacob might easily have been run over by the cars while sleeping under the open sky, and that Joseph became the Egyptian king's "apprentice" when he was elevated by him to office.

It will always be especially difficult to arouse apperceiving ideas for the thoughts and emotions of historical characters. In such cases it is best to direct the child's attention to his own inner experiences, and allow him to linger in thought upon those moments when he was moved with anxiety and dread, or fear and repentance; when the voice of conscience lifted itself to punish, or the satisfaction arising from a kindly and effective deed rejoiced the heart. An occasional quiet return into one's own inner world, such as history, when taught with tact, can cause, not only teaches us to under-

stand better what passes in the souls of others, but leads gradually also to right self-knowledge, which is the first condition of self-control.

Thus those numerous ideas and experiences which the child has secured mainly through apperception are themselves in turn active in instruction as apperceiving agents. They give the proper tone and meaning to the words of the teacher; they are the material by means of which the youthful mind gradually builds for itself a new historical world: truly a great work!

But soon books come to the teacher's aid; the child must learn to comprehend fully new thoughts from the printed page without assistance from others. That is a far more difficult task than to convert oral language into mental images. For all reading involves a threefold apperception; first, a series of letters or word-pictures must be perceived, or recognized as more or less familiar; then the corresponding series of sounds; and third, the group of ideas for which these symbols stand. When we perform these three acts of recognition simultaneously, and associate them with one another, we understand what we read. The child, at the age under consideration, is not so successful in such efforts as the adult. As a rule he is not able to recognize the three series at one time, and when he nevertheless attempts it, while he is directing his attention to the meaning of the words, frequently the result is "guessing," which is a false apperception of the series of letters and sounds. He usually prefers, therefore, to concentrate his mind upon the sounds first, and reads the words without fully comprehending their connection. The apperception of most of the content follows later; *i. e.*, the child must look once more at the words and examine them with special reference to their meaning, if the thought is to be entirely revealed to

him. He cannot, then, immediately understand a story which he himself reads; whereas the same words, if related by the teacher, are instantly grasped. It is the privilege only of older children to perceive readily and easily the meaning of what they read.

From what has preceded, we see that the more thorough the comprehension of the numerous new ideas is, *i. e.*, the more correct and numerous the connections into which the related contents of the mind have entered, the easier becomes the logical arrangement and perfecting of the knowledge acquired. The indistinct general notions, which, as we saw, being favored by the names of genera, are characteristic of childhood, receive now sharper outlines and a richer content. Let us explain the origin of these general notions clearly by an example.

As long as the child in early youth saw only red centifolias he imagined all roses to be red and full. Then in a field somewhere he found a bush with similar flowers, but they were neither red nor filled. That seemed strange to him, and for a moment he was in doubt whether he had before him an entirely new plant, or one already familiar. For, the related idea of the centifolia, which was reproduced by the new observation, differed from it in several striking particulars. But however strange this may have seemed at first, there were decidedly more characteristics in which the two agreed than in which they differed. And therefore the mind (in accordance with its peculiar nature, which everywhere struggles for unity and order among its ideas) emphasized, as the essential part, that which was common to the two perceptions, and classed the new under the old as being similar to it. The child expressed this conclusion in the words, "That is a rose too, but a white and simple one." In spite of several points of contrast, he

united the new perception with the old idea, and applied the name *rose* to the former because it had too much in common with the latter to allow their complete separation. Had the name of the genus, *rose*, been given to him simultaneously with the new perception, the apperception would have taken place much more easily and quickly. But at all events it was not the result of a special act of the will, of consciously directed thought; the mind created rather the general notion while involuntarily observing the content of the individual notions that were fused. Further, neither of the two was able to assert a superiority over the other; wherefore it remains doubtful which should be regarded as subject, which as object of the apperception.

But this process of apperception will be altered now, since in the course of time the child's experience and mental capacity increase; for he becomes acquainted with new species of the rose, for instance the yellow and the moss roses, and observes them more minutely. Every new similar perception is then welcomed by a related group of ideas in the general concept, which is superior to the new perception in the extent and strength of its connections. When a perception joins such a group, it surrenders its independent existence in order to enrich the apperceiving notions with one or more new properties. Each one of these new observations, therefore, enriches and perfects the concept *rose*, and when the latter contains most of the essential characteristics, the child may be said to have the *concept rose*. It contains many non-essentials also, but, on account of the differences among them, they cannot rise to the degree of clearness attained by those elements common to all the notions of the genus. While in early youth this fusion of a new idea with a related older one took place wholly unconsciously (although it was in obedience to certain laws of

logic), it now becomes a conscious act. Some reflection precedes the apperception: the child draws conclusions, he passes judgments, he *thinks*. The final judgment is the simplest expression of the completed apperception. When he says, "That too (*i. e.*, the moss rose) is a rose," it means simply that the subject (namely, the new perception which at first could not be classed) has been apperceived by the predicate (the notion *rose*, already at hand). We shall later on consider the fact that concepts arising in this manner possess, on account of their greater perfection, far greater apperceiving power than the indistinct general notions of childhood.

While the child is growing intellectually, he is making progress ethically as well. We have already seen that the ruling sphere of ideas and emotions determines in the main the moral insight of the human being. He usually judges his own moral worth and that of others according to what he himself loves, or what he wishes and longs for for himself. There is, therefore, no doubt but that in early youth, as well as in infancy, the *feelings and interests of sense* influence to a considerable extent the moral consciousness of man. Indeed they can become the one controlling group of ideas among bad and uneducated children; with these anything is permissible that pleases. On the other hand, in the case of the well-trained child, they are subordinated more and more to the ideal example of the parents. He no longer follows blindly this authority, to which he has always been subject. But by comparing them with other persons and with his own imperfect being, he comes gradually to feel an unlimited reverence for his parents, which makes voluntary obedience toward them a duty, and causes their example to be regarded as a model. And soon other authority is associated with theirs; namely, that of teachers,

near relatives, leaders among school companions, and masters with their servants. Especially in sacred history does God, the Perfect and Just One, appear as the highest authority, whose supreme will and control impress themselves indelibly upon the pupil's mind. *These are the examples which especially determine his moral conceptions, and hence control his apperception on moral questions.* They are vividly in mind when he acts; *they are his conscience.* Not as though he were unable to distinguish for himself what is good or bad. He knows unworthy deeds or worthy motives in themselves very well, entirely apart from all thought of what his parents, or teacher, or God, would say on the matter. But such pure, independent moral feelings and judgments do not appear at this stage of development in the abstract, but rather in connection with certain model examples. Just as the thought of a child in all spheres of knowledge deals in part with very imperfect general pictures, not with general concepts, *so in the field of ethics his morality does not show itself effective in the abstract form of the idea, — the principle, — but in the concrete form of the ideal.* When one observes closely what guides the moral judgment in early youth, one finds that, in most cases, the example of some real person closely related to the child consciously or unconsciously exerts a deciding influence in the apperception, and thus largely determines the will.

We come now to the third stage of development, which covers a ripper age of boys and girls, the period from eleven to fourteen years of age. Here the processes in apperception are much the same as those we have already seen in the preceding stage. For instruction still continues to enlarge the child's experience by means of words, pictures and the presentation of new concrete objects. But the demands now made upon his ability are raised. The world of forms

and symbols comes more to the front than heretofore, and these the pupil is to fill with ideas and thoughts from his mental store. If he studies intelligently he must see the figures in Drawing and Geometry as real bodies, and learn to interpret mere outlines differently according to their shading and color. The familiar formula of Geometry, "Imagine a line drawn," etc., involves a somewhat difficult process of apperception. Geography imposes an equally difficult task upon the pupil when it requires him to translate the mute symbols of the map into fresh-colored images of mountain ranges and broad plains, of snow-capped mountain peaks and deep valleys, of rivers and lakes and the boundless ocean, of villages and cities, fortifications and all the various objects of human interest. The thought-studies rely more than heretofore on mere words to produce new ideas and knowledge, and it is the pupil's duty to bring to bear the best he can from within himself; *i. e.*, through his inner perceptions to put meaning into the words he hears, or, as has been well said, to follow the teacher's discourse by the help of the imagination.

And likewise, when reading, the pupil must now learn to apperceive the thought at the same time with the printed symbols, to read while thinking and to understand while reading. He shows himself better and better prepared to meet such a great demand for apperceiving ability; for the ideas which now stand at his disposal for the comprehension of the new matter are much more numerous and correct than in the former stages. Also many of his concrete notions have become condensed into clear concepts and united into groups and series. This more closely associated and richer store of knowledge is eager for employment, and shows itself effective with every new related perception. It not only sharpens the senses so that they observe what easily remains

hidden to the untrained eye, *but it teaches also to comprehend more correctly, reasonably and rapidly.* By the help of the apperceiving concepts new facts find the right explanation with greater certainty, and secure their proper places in the thought-structure. Hence it happens that a pupil in an advanced class observes a plant, an animal, a natural phenomenon, with very different eyes from those of a child in a beginning class, — namely with eyes which are the result of scholastic knowledge. He is able to apperceive not only more forcibly and comprehensively, but also more correctly. Whereas he was subjective and fanciful in his interpretation, he has now become more objective and reasonable. This change betrays itself in all fields of knowledge by his critical attitude towards new impressions. “The *naïve* manner in which, during the first half of his school life, he accepted old legends and mere outward appearances as true, gives place more and more to a different frame of mind and behavior. The riper scholar does not believe everything so unhesitatingly, but begins to ask for proofs; and where freedom of speech is allowed, he does not grant immediately the reasons and proofs given, but, instead, weighs them in discussions that are often spirited.”¹

It is true that critical, thorough and objective knowledge is present in full measure only when one thinks in real concepts. Still the foundation for such thinking is being already laid at this age. In the previous periods of development the mind reveals its effort to establish unity and order among its products by forming its ideas into group series; now, since the quantity of knowledge threatens to become unmanageable, it is active in uniting these groups into concepts and general rules, into laws and principles. The boy feels the need of giving greater clearness and unity

¹ Pfisterer, p. 241.

to what he knows, and of advancing from uncertain general pictures to clarified concepts. And so he exercises his thought in the criticism of those general pictures which his growing insight has shown to be inadequate. Such childish definitions as, "One who lies tells an untruth," or "An echo is that which returns again when it is thrown against the wall," no longer satisfy the youth. He strives now for a stronger grasp of ideas in order to meet the objections of his school companions. Under the teacher's leadership he endeavors clearly to separate from one another, fields of thought that are related, and therefore such as could be easily confused; also to become acquainted with and to comprehend all the ideas under one and the same concept, so that no essential characteristic of the latter may escape him. He compares and distinguishes the material collected, associates elements that have heretofore stood isolated in his mind, or breaks up groups of ideas that are incompatible with one another; he unites the similar and separates the dissimilar, and all the time travels about through various sets of notions with a speed and ease which find their only explanation in the activity of apperception. Similar or related members of reproduced series set in motion the thought-groups to which they belong and help preserve their union, thus rendering a thoughtful, reflective study of the same an easy matter. The apperceiving attention scarcely allows any notion that is within the horizon of consciousness or beyond it to escape, provided it falls under the general concept, or even appears to. It recognizes the essential in everything, and instinctively anticipates that which subsequent reflection establishes as correct. This latter has simply to choose out the important characteristics already partly known, separate them from the non-essentials and unite them into a pure concept, or definition.

Logical concepts in the strict sense of the word, *i. e.*, such as contain no non-essential, accidental property whatever, are, to be sure, like the ideals that human effort never succeeds in fully realizing. Even adults can attain them only approximately in their thinking.¹

Naturally enough then, children will seldom reach them. They think chiefly in *psychological* concepts. But these can receive such a clarification that they perform almost the same service for knowledge as the logical concepts. And it is just such clarified general ideas, sufficient for logical thinking, that the boy is acquiring and can acquire, through apperception, in all fields of knowledge. They, together with the rules and laws to which, at a maturer age, he

¹This is in accordance with the nature of the concept. It is not, as has been stated in our former editions, a *new and separate creation* produced by the soul, originating from the fusion of the common and essential characteristics of similar notions. We understand, on the contrary, under *concept* the entirety of the similar essential characteristics which thought, passing through the notions rapidly, chooses from among them and holds side by side in consciousness. It is not a new mental product existing apart from and outside of the concrete notions; but it *is thought out* each time, inasmuch as a person from among the numerous ideas of the same kind (or also from only one idea) lifts exclusively the essential characteristics into the centre of consciousness and endeavors to isolate them from the others, which recede or withdraw (an attempt that is always, of course, only partially successful). It is like a melody, which can be easily distinguished in a piece of music of several parts on account of special emphasis or peculiar registering, while, however, it never ceases to form a constituent part of the separate accords. It happens to us regularly, when we attempt really to think a concept and not simply repeat the words of the definition, that we involuntarily glide down among its individual notions, that we hasten through these quickly and emphasize what is common and essential, rejecting the non-essential. The general is not really *separated* from the particular, but only *distinguished* from it; for deep down in consciousness it is always united with what is concrete. And for just that reason, because the concept is not a finished product, but the result each time of a very energetic concentration of consciousness, it is so difficult to think it strictly in the logical form.

gladly rises out of the multiplicity of phenomena, constitute the apperceiving agents through which, in the future, he comprehends his new experiences more correctly and rapidly than heretofore. The most important effect of instruction is that it makes the pupil more and more capable of apperception, *i. e.*, independent thinking, and therefore less subject to the control of outward impressions. With every new effective act of apperception that instruction superintends, he becomes better able to protect himself from the forces of the mechanism of ideas, from the power of mere fancies, and to follow a definite purpose in collecting and concentrating his ideas. Thus while the quantity of his thought has grown larger, the energy of his thinking has also increased; he has acquired greater ability to hold many thoughts together at one time, to examine critically large groups of ideas, and has thus gained the most correct concept possible.

In the sphere of moral thoughts and deeds the feelings of sense do not predominate to such an extent as in the earlier stages of development. They are counterbalanced by higher, spiritual interests that have awakened with the development of a valuable thought-content.

As noticed above, successful apperception is the source of interest. In proportion as the field within which active apperception is employed is rich, interest will be many-sided and the will manifold and strong. The child's mind is now no longer entirely absorbed in bodily satisfactions, but it begins to concern itself with higher things. The enjoyment of well-mastered knowledge, of æsthetic forms and of independent thought, enlarges the child's idea of happiness. But however much these intellectual interests may pave the way for a moral disposition and lend it support, they are still not necessarily bound up with it. They may just as readily serve a naked egoism, which cultivates virtue

merely to gain advancement, asking first, what profit or hinderance will it be to me? Where this disposition dominates thought and effort, there can be no objective and purely ethical judgment of one's own or of others' purposes; but in such cases apperception is mingled with selfish, pleasure-seeking prejudices. Who would deny that the boy is often inclined to such a view of life?

But a painstaking education tries to prevent such a tendency from becoming a habitual drift of one's nature. We have seen before how the living example of parents and teachers may become such a power over the child, under normal conditions, that he will find it difficult to resist its influence. Those ideal characters also, drawn from sacred and from profane history, with which instruction makes him acquainted, may now exercise upon him more and more of their formative power. And just this fancied intercourse with historical persons is able, in a high degree, to generate pure, moral thinking. So long as a child exercises his moral judgment upon himself and his surroundings, the decision is seldom free from selfish interest and is therefore seldom objective. How easily and even unconsciously he allows himself to be led by secret wishes or by a regard for other persons. Very different is it when, in fancied intercourse with ideal persons of antiquity, the child is impelled to ethical perception and judgment. Those historical characters are persons to whom he can do neither a favor nor an injury, and they in turn have no power either to benefit or harm him. Here the moral judgment can ripen in perfect freedom, uninfluenced by other interests or by reference to the child's own actions. Here the boy first shows his inclination and capacity to estimate moral dispositions objectively and trains himself to a pure ethical comprehension. In the historical world that now finds entrance

to his head and heart, he discovers a second power of soul that gives direction to his ethical perception. But the ethical types which real and fancied intercourse with ideal persons present to him, are the foundation upon which thought gradually builds up general requirements and commands, as they have found classical expression, for example, in the decalogue. With the aid of such general and universal precepts, which the boy has acquired and stored away, he now apperceives his own action and that of others. They are the rules to which he subjects conduct. But those rules have not yet acquired for him the weight of principles. For, however completely they may have found acceptance with him, they yet remain to him, primarily, only the expression of the divine will, — not self-given rules, but commands. Behind all the ethical rules that he has recognized as valid stands God as a power commanding reverence, who maintains his precepts intact and for whose sake the child incorporates them into his own will. “To have God before one’s eyes” — with these words of the sacred text one might summarize and illustrate the character of ethical apperception that is suited to a well-bred boy in our present stage of culture.

At first the child’s own body was the starting point and centre of all his feeling and desires, but the youth learns gradually to look upon his body as a part of the external world, and with every fresh inner experience his self-consciousness retreats more and more into the introspective life. In his previously acquired ideas and feelings he now also seeks his ego or self. This entire self-consciousness as the essential basis of his nature he sets over against external impressions and disturbances.

This transformation of the notion of the ego is carried out most fully in the next period of development, young man-

hood, which we must briefly consider. It is the period of the domination of the sensibilities, in which mental states arising from the feelings chiefly guide the person. The intellectual feelings can develop in a much richer, purer form, becoming stronger, and more permanent, because the conditions in favor of them are present in a far different degree than in previous stages of growth. Consider, for example, the development of æsthetic feeling. The admiration of beautiful forms appears quite early. The child, we saw, is delighted with the harmony of rhyme and with the smooth movement of measures. He is able to appreciate the charm of symmetrical figures and objects, and to prefer a beautiful face to an ugly one. In addition to this come the well-devised plans of instruction for discovering and appreciating the beautiful in the simplest sensations of space and tone, in geometrical and plant ornamentation, not less than in poem and song. But they are only isolated elementary æsthetic feelings that thus arise, not strong unified sum-totals that take root in important well-connected masses of thought, and become stimulated in a greater degree by the entire view of a work of art. That which gives interest and pleasure to the boy in viewing a painting or an architectural work is less the harmony of the constituent form-elements, less the thought realized, than single unessential or accidental parts which lie outside of the æsthetic judgment. The right understanding of a work of art, and the deep and pure feeling for its beauties, first disclose themselves to the youth or man. Where the variety of forms confuses the boy's mind, the trained eye is able to detect the law by which the whole is determined; it reveals fundamental forms that reappear in the most varied setting, and shows harmonious construction of the whole. So the master-piece of art enters consciousness in the form of a clear and well-articulated total effect,

which, by virtue of its form, awakens a strong and elevating feeling. But for this mental picture we are indebted only in a small degree to the ear and eye, which convey to us the sense-impression. Its existence is due rather to the powerful influence of all the memory-pictures that we have before acquired from similar forms, and of the æsthetic judgments and feelings that sprang out of a close observation. The eye, which in observing a picture or a Gothic dome quickly rectifies itself and separates the important from the accidental, is guided by certain rules which it has previously appropriated and is supported by an acquired efficiency in supplementing certain serial forms from memory. Since we recognize familiar or similar things in a work of art, the eye need not lose itself in the parts, but may confine itself to the chief characteristics. We thus apperceive the beautiful by the aid of previously acquired æsthetic perceptions, and each person's æsthetic sensibility is dependent upon his memory content.¹

This is true in a double sense of those works of art which please not only because of the pure form, but for the sake of what they signify or suggest. When we attribute a thought-content to a painting or statue, or when we find pleasure in the actions or sensibilities to which they give ideal expression, we comprehend them in accordance with our own store of ideas and feelings, and the æsthetic impulse is dependent upon the degree of thoroughness and ease with which the apperception of the beautiful is accomplished. But this kind of apperception presupposes such a wealth of knowledge and inner experience as one does not usually acquire before young manhood. We have in mind not

The knowledge of this dependence of our sense of form upon revived memory pictures has led even to the formation of a new law controlling the whole æsthetics of form.

simply such master-pieces as Raphael's Disputation and the School of Athens, or Kaulbaeh's Destruction of Jerusalem, or the pediment group of the Parthenon, whose æsthetic appreciation is conditioned upon numerous religious, historical and mythological facts, but chiefly upon all those works of art whose beauty can only be revealed to a soul which has known and experienced all those feelings, passions and conflicts which find representation in these works.¹

Sympathetic feeling of joy or sorrow is, like æsthetic appreciation, dependent upon the content of our memory, upon what we have pondered and experienced in our own hearts.

But we can share the feelings of another person. Since they cannot be directly perceived by us, they must manifest themselves by peculiar changes in the various physical organs, through the agency of words, manners, gestures and other external signs. The instant we perceive these, there arises above the threshold of thought, in accordance with the law of indirect reproduction, the notion of identicæl or similar expressions of feeling as we have observed them previously in ourselves; and frequently they appear with a strength and life that cause us to imitate involuntarily the movements of another. According as this group of ideas acquires total or partial reproduction, it enters into a relation of interchange with the signs of feeling that we have observed in others, and as soon as the similar elements in the two groups predominate, they fuse together completely. Now for the first time the mind, by the aid of the old group, is able

¹The young man now interprets the voices of nature in a different strain from that of his childhood and gives a different meaning to the simple childhood's song of the swallow, and with poetic sympathy follows the poet when he sings:—

“When I said farewell, when I said farewell,
The world was full and fair;
When I came again, when I came again,
It had grown so poor and bare.”

to interpret the new perception. The old ideas supplement the latter, since by the analogy of experience we can conjecture what is taking place in the mind of another, when the latter, for instance, blushing, drops the eyes or stammers confused words; we can tell what thoughts are storming upon him in the moment when sighs are forced from him and tears stream from his eyes. Now we understand the words, manners, and gestures of another. There is but one step more to sympathy.

The apperceiving group of ideas was previously the seat of a feeling by virtue of the constraining or stimulating conditions existing within it or in consequence of its value for the ego. While this group of ideas is being reproduced and strengthened by fusion with other new and similar perceptions, the aforesaid constraining and stimulating relations are produced anew, and the relations to the self are recognized again, so that a similar feeling arises above the threshold of consciousness. But it has a like significance with the feeling of another person, since they are the same, or at least similar notions out of which both spring. At the moment when we understand our neighbor, when an appreciation of his mental state is complete, we feel his joy or grief; we have sympathy with him as if we were touched with the same cause of feeling.

But the way to sympathy, as pointed out in the foregoing discussion, is through apperception. Without it there is no appreciation of others' states of feeling. Where this is lacking, the joy or sorrow of our neighbor knocks in vain at the door of our inner life; there remains no sympathy with weal or woe. And now we understand why the child, which is usually so inclined to share the pain of another, limits its sympathy mostly to the narrow circle of its own nearest acquaintance; also how the boy can pitilessly and thought-

lessly injure another's success, or coolly ignore his need. We find it explicable that even well-meaning children are often guilty of an apparent cruelty which is certainly foreign to their nature, that they can play thoughtlessly beside the coffin of a loved one without feeling the loss or understanding the tears and grief of their friends. It would be an error to infer a wicked and hardened disposition or a rude and depraved nature, where sympathy with others' weal or woe is lacking. In very many such cases there is only a lack of apperception. One cannot put himself in the place of his neighbor, since the latter moves in an entirely different circle of thought; one cannot sympathize with him because one has not experienced what troubles or exalts him: his feelings awaken nothing kindred in the soul of the observer. But whenever the sight of a suffering or rejoicing neighbor transports one vividly into the time of his own success or misfortune, where one hopes or fears for himself what happens to another, there a strong and living sympathy will not easily fail; there it constrains even hard hearts. In a beautiful and fitting manner the immortal Homer, in a scene of the *Iliad*, has vividly represented this psychical process. Hector, the splendid hero, has just fallen before the walls of Troy. No favor is shown him by his rival, the fearfully angered Achilles. "Be silent and conjure me not on bended knees, nor in behalf of thy parents, for no one shall drive the dogs from thy head." — Thus had he darkly answered the petitioner and, without regard for the distress of the despairing parents, he dragged the body through the dust, visiting upon his enemy a treatment unworthy even of an iron heart. Daily he repeats the shameless deed, pondering how he may most completely avenge his friend Patroklos. Then on the twelfth night there appears before him the gray-haired father of Hector. While pray-

ing for the body of his slain son, he reminds Achilles of the aging father whom he has left behind in his distant home, how the latter is even now, perhaps, hard-pressed by surrounding peoples, and, deprived of help and protection, longing for the joy of his age, his only son, as he waits for his return. "Like grief has fallen upon me," continues Priam, "and worse. Not only have I lost a son, who protected the city and all of us, and the fifty sons who were born to me, but even now I press to my lips the hand that has slain my children." Silently Achilles receives the words of the king. But as the latter speaks to him of the father at home, a thousand thoughts rush through his mind and awaken feelings of longing and sorrow. For he considers how, according to the decree of the gods, he shall never see his home, how he is early to descend to Hades, and will never provide for his aged father. And as grief now enters his own soul, suddenly his understanding opens to the grief of the suppliant old man. The same Achilles who rejoiced so jubilantly at the fall of his enemy, who heartlessly abused and dishonored the dead, knows now how deeply the unhappy father suffers, who lies before him in the dust. He feels in his own distress the grief of another. The ice which enveloped the cold and even cruel heart of the young man, is now melted away; he weeps with the king, he springs down from the seat and, lifting the old man by the hand, speaks to him these words of sympathy: "Unfortunate man, of a truth thou hast endured much grief of heart."

Thus pain and grief make the heart receptive for all tender impulses and feelings. This is the blessing of sorrow—that the *I* which in success and pleasure is easily isolated and subject to egoism, is expanded to the unselfish and sympathetic *we*, that it deepens the heart and plants in it a

living sympathy. Perpetual sunshine and an unbroken succession of fortunate days would little enrich our soul-life; for as Rückers says: "The stream flows turbid that has not passed through a lake; the heart is still impure that has never known sorrow."

The more a human being has tasted grief in the school of heart-trouble, and the more he has deeply experienced the changes of fortune, the more easily and fully can he understand another's state of feeling, the quicker can he rejoice with those who do rejoice and weep with those who mourn. For this reason the well trained young man will ever distinguish himself above the boy by the strength and variety of his sympathetic feelings.

But this enriching and deepening of soul experiences (sensibilities) is in the main identical with the promotion of moral disposition, of will action. For it is in the feelings that our interests, inclinations, desires and undertakings find root. The more our nobler intellectual feelings grow and prevail, the less can impure, low thoughts and inclinations manifest themselves; the greater the strength with which moral feeling speaks to us, the oftener does the will follow it. Besides this, with feeling the inner perception grows in vividness and power. The periods when those states of mind prevail which are dominated by feeling, are also the periods of quiet introspection and sober self-observation. Just as the young man in the field of scientific knowledge has learned to gather up and bind together his thoughts, so now he is better able to hold fast, to contemplate and to pass judgment upon the pictures presented by his own will and conduct. And now when he applies to these the standards which he has acquired in his intercourse with real and fancied persons, when he apperceives them by means of the ethical laws, as the purpose of his teachers and the will of

God have represented them, a living moral sensibility is certain to follow. Inner satisfaction will succeed when conduct corresponds to the type and awakens a desire always thus to act in similar cases. In the form of remorse, or a torturing feeling of pain, on the other hand, there will be the attendant conviction that his acts of will cannot stand in the presence of his moral patterns, and the urgent requirement springs up to be more careful in the future and to avoid the repetition of such humiliating moments. To be sure, egotistical ideas and motives, the consideration of one's own sensuous comfort, the lower feelings and inclinations will manifest themselves all too soon, in order to make excuse for the mutually crminating ideas, to apperceive the present case of conduct in accordance with selfish principles and interests, and thus to give it another and more favorable turn. "Necessity knows no law," "Each one is his own nearest neighbor," "One must howl with the wolves," "When one is in Rome one must do as the Romans do" — these are some of those maxims of worldly wisdom, which seek to gain acceptance and indeed in many cases determine the valuation of a moral object.

And yet the more vividly and feelingly the pure model of his earthly and heavenly authorities stands before the soul, together with the remembrance of all those cases in which he has followed it with self-satisfaction, and the more his moral judgment and feeling have been developed in freedom, purity and strength in accordance with the ideal characters of history, so much more will such experience stand forth as psychical forces, as a power which works manfully against egotistic tendencies. They will not always preponderate in the moment of decision, but they will at least secure an audience afterwards as the voice of conscience. And thus out of such experiences, bound up with elevating or humiliating

feelings ; out of right principles, which spring from remorse or from moral self-satisfaction, along the pathway of apperception, gradually a rule, or universal ethical judgment arises, which stretches over a whole multitude of the same or similar exercises of will. But it will be set up with the firm determination that it shall prevail as a law for our conduct in all the future. A new temper of will begins therefore to spring up, whose object and content is that rule, or rather the corresponding command, which the young man once learned to know and estimate as God's or man's will. But now it presents itself to him, not as the expression of another's, but as the content of his own will ; not as a command, but as his own free determination ; not as a precept that one can approve and then fail to act in accordance with, but as a fundamental law that is obligatory for his own action. In this way the young man gradually transforms these external laws into his own maxims ; the knowledge of an authoritative will becomes his own moral insight.

These maxims and principles, which we have seen springing up when occasioned and aided by apperceiving activity, are in their turn the first among moral regulations adapted to apperceive vigorously and easily kindred dispositions and actions. For they acquire a high motive value from the feelings out of which they spring and from the will which supports them. They are the standards by which the adult measures his own and others' actions. Through them we acquire the faculty of quickly grasping new impressions in the moral world and of responding to them with suitable decisions of the will. With their help we observe and regulate our impulses and desires, and those wishes and inclinations of will that spring from the psychical mechanism. If one of them does not harmonize with the general maxim and cannot attain to an equal motive power with it, it is

rejected as unacceptable. And now one gives up a wish or an intention because he has reconsidered the matter; one denies himself an enjoyment so as to avoid unreasonable action, imposes upon himself an effort so as to escape an inner disapproval. If, on the contrary, the individual desire is in harmony with the principle in mind, it will be acceptably apperceived with the aid of the latter; it also attains a power and vigor it would not have secured alone, while on the other hand the practical principle is strengthened and established by the recently apperceived act of will. If the will has reached its object, the maxim is a second time brought forward with the question whether the actualized desire corresponds to its content. The result of the accomplished apperception finds consciously a very strong expression in those agreeable or disagreeable feelings which we learned above to recognize as inner satisfaction or remorse.

Apperception is accordingly the first condition for self-criticism and self-mastery. In that moral principles are employed in apperception, they become the defenders of the sensibilities of the soul, which endeavor to protect it against hostile assaults such as are not infrequently attempted by the passions and secret impulses, or by violent and sudden overthrows. If these maxims are gathered into a system that expands over the whole activity of the will, if again they are subordinated and held together by certain universal superior principles, as the single notion is held by the general concept, then the inner life of the person acquires that seal of unity which is denominated character. Then a circle of moral ideas acquires mastery in such a way as to make itself felt in apperception, not only now and then, as at church and on solemn occasions, but always and everywhere, and as a secret power able to direct our action.

This group of ideas, standing at all times close to con-

sciousness, attended by strong feelings and acts of will, takes still deeper root and works with still greater certainty the more it is supported and permeated by a religious temper. He who seeks the origin of moral ideas in that highest and most venerated Being who first willed them, will not hearken to them without looking up reverently to God, the only perfect ideal of a morally free person, from whom power and courage descend to him in the battle against evil. For him the ethical ideals found in God and in his Son, sent for our purification, acquire personal life, so that they determine his will-action more strongly and deeply with all the power of concrete reality. In him the enthusiasm for moral ideas is changed into an inner love for the highest ideal, and obedience to self-chosen maxims is changed more and more into a free and willing obedience to the highest lawgiver. Of him who apperceives his will-actions and conduct in the spirit of such prevailing thought-centers and dispositions, the Scripture says: "He has God before his eyes and in his heart." He approximates moral freedom, that ideal which the youth seldom indeed, and the man only in a limited degree, can attain.

Let us look back again at the results of our investigation. We observed first what essential services apperception performs for the human mind in the acquisition of new ideas, and for what an extraordinary easement and unburdening the acquiring soul is indebted to it. Should apperception once fail, or were it not implied in the very nature of our minds, we should in the reception of sense-impressions daily expend as much power as the child in its earliest years, since the perpetually changing objects of the external world would nearly always appear strange and new. We should gain the mastery of external things more slowly and painfully, and arrive much later at a certain conclusion of our external ex-

perience than we now do, and thereby remain perceptibly behind in our mental development. Like children with their A B C, we should be forced to take careful note of each word, and not as now allow ourselves actually to perceive only a few words in each sentence. In a word, without apperception, our minds, with strikingly greater and more exhaustive labor, would attain relatively smaller results. Indeed, we are seldom conscious of the extent to which our perception is supported by apperception; of how it releases the senses from a large part of their labor, so that in reality we listen usually with half an ear or with a divided attention; nor, on the other hand, do we ordinarily reflect that apperception lends the sense organs a still greater degree of energy, so that they perceive with greater sharpness and penetration than were otherwise possible. We do not consider that apperception spares us the trouble of examining ever anew and in small detail all the objects and phenomena that present themselves to us, so as to get their meaning, or that it thus prevents our mental power from scattering and from being worn out with wearisome, fruitless detail labors. The secret of its extraordinary success lies in the fact that it refers the new to the old, the strange to the familiar, the unknown to the known, that which is not comprehended to what as already understood constitutes a part of our mental furniture; that it transforms the difficult and unaccustomed into the accustomed, and causes us to grasp everything new by means of old-time, well-known ideas. Since, then, it accomplishes great and unusual results by small means, in so far as it reserves for the soul the greatest amount of power for other purposes, it agrees with the general principle of the least expenditure of force, or with that of the best adaptability of means to ends.

We have every reason, in this process, to recognize and

admire the wisdom of the divine Creator, who has established such suitable provisions for giving freedom and furtherance to our mental life.

As in the reception of new impressions, so also in working over and developing the previously acquired content of the mind, the helpful work of apperception shows itself. By connecting isolated things with mental groups already formed, and by assigning to the new its proper place among them, apperception not only increases the clearness and definiteness of ideas, but knits them more firmly to our consciousness. APPERCEIVING IDEAS ARE THE BEST AIDS TO MEMORY. Again, so often as it subordinates new impressions to older ones, it labors at the association and articulation of the manifold materials of perception and thought. By condensing the content of observation and thinking into concepts and rules, or general experiences and principles, or ideals and general notions, apperception produces connection and order in our knowledge and volition. With its assistance there spring up those universal thought-complexes which, distributed to the various fields to which they belong, appear as logical, linguistic, æsthetic, moral and religious norms, or principles. If these acquire a high degree of value for our feelings; if we find ourselves heartily attached to them, so that we prefer them to all those things which are contradictory; if we bind them to our own self, they will thus become powerful mental groups, which spring up independent of the psychical mechanism as often as kindred ideas appear in the mind. In the presence of these they now make manifest their apperceiving power. We measure and estimate them now according to universal laws. They are, so to speak, the eyes and hand of the will, with which, regulating and supplementing, rejecting and correcting, it lays a grasp upon the content as well as upon the succession

of ideas. They hinder the purely mechanical flow of thought and desire, and our involuntary absorption in external impressions and in the varied play of fancy. We learn how to control religious impulses by laws, to rule thoughts by thoughts. In the place of the mechanical, appears the regulated course of thinking; in the place of the psychical rule of caprice, the monarchical control of higher laws and principles, and the spontaneity of the ego as the kernel of the personality. By the aid of apperception, therefore, we are lifted gradually from psychical bondage to mental and moral freedom. And now when ideal norms are apperceivingly active in the field of knowledge and thought, of feeling and will, when they give laws to the psychical mechanism, true culture is attained.¹

¹ "Only the skill to rise quickly in every emergency to universal truths, makes the great mind, the true hero in virtue, the discoverer in science and art."—Lessing, *Briefe*.

We must regretfully deny ourselves in this place the discussion of the important rôle that apperception has played in the development of whole peoples.

PART II.

THE THEORY OF APPERCEPTION

IN ITS APPLICATION TO PEDAGOGY.

As a member of a nation, the pupil finds himself from the beginning bound to a certain stage of civilization, which his ancestors have transmitted as the result of thousands of years of growth, which they have made through hard and painful labor. To get possession of this inheritance must be his first and foremost duty. For only thus can he himself exercise his own powers in the midst of a great society, according to moral principles; only thus can he contribute his share to preserve, increase, and transmit the inheritance of the fathers to the coming generations for still greater perfection. To this end education first of all should aid him. It must assume the responsibility of leading the child to appropriate the most important mental treasures which have been brought to light by the work of culture, so that, starting from this basis, he may advance still further. It should awaken in him a right estimation of these results of civilization acquired by hard conflicts, and a right appreciation for the duties of his time, that he may share in the life and struggle thereof with true insight, warmth, and power. In a relatively short time it must lift the youth as far as possible to the height of intellectual and moral and religious culture to which mankind, and especially his own

people, have attained. How shall education accomplish this high purpose?

Judging by the popular view, we might think that the way to this result was clearly and simply pointed out:— let the pupil be taught the results of the intellectual labor of mankind, and he will quickly surmount the heights of culture. In the opinion of many people, language has “the power of transmitting to the hearer, with the full force of sense-impressions, the notions of the speaker and of calling forth in the hearer the feelings of the speaker with undiminished strength.” It is all too easy for the incipient educator to draw the consequences from this doubtful theory, and to have faith in the magical power of his own words to generate and to call forth in the mind of the child the very same ideas and impressions that he himself connects with them. If the facts were really so; if, without further care or effort, at the sound of a word the child invariably received the corresponding idea of a thing, then nothing would be easier than to teach and train. It would be sufficient for a teacher merely to ponder a subject of instruction thoroughly and to give expression to his thoughts in a clear presentation, so as to help the pupil at once and without effort to a knowledge both clear and deep. Then forsooth the results of science, the materials of culture, might be simply transmitted, as a jug is filled. Then one might speak, not only of a certain class of recitations (as has really happened) in which the pupil “has nothing to do,” but the same thing must be said of all of them. In this case nothing would depend upon the understanding or study of the pupil, but everything upon that of the teacher. But happily this is not so. We saw before how the child constructs no idea, whether it be given him through objects, pictures, words, or letters, without bringing into exercise

the previously acquired contents of his mind. We discovered that the little ones, in all that they acquired through instruction, were thinking and feeling something peculiar to themselves, that their original thoughts and feelings were secretly running side by side with the words of the teacher. The tension and the involuntary absorption, with which they follow good instruction, testify to this secret activity; so also do the bright glowing eye, and the lively sunshine which gleams from their faces whenever the word of the teacher has struck the right tone or has touched the deepest chords of their feeling. It is further proved by the lively questions of the pupils, by their joyful assent, which perhaps breaks forth in a hearty: "Yes, that's so!" Whoever has observed in such moments a joyfully active group of children, knows how far removed their energetic learning is from a simple, passive reception, and that not the teacher, but they themselves have the most to perform. He is convinced that knowledge cannot be transmitted, that the pupil must work it out independently for himself. That is what the poet means when he says: "What you have inherited from your fathers, you must earn again in order to possess it."

As has been already established, all mental treasures that education and instruction should transmit to the pupil, can be appropriated only with the help of a previous group of ideas, and then only to the extent that the greatest possible number of kindred ideas is brought to bear upon new facts to set them in their proper light, and to bring them into the best possible adjustment. "No one hears anything except what he knows, no one perceives anything except what he has experienced." This saying is true here also. What is entirely new and can find no point of connection is either not understood or only superficially apprehended. On the other hand the best instruction is given when the words of

the teacher stir the inmost thoughts of the child, so that he is not passive, but wholly active. And so it remains true, as we have already seen, that the most eminent characteristic of learning is not to be denominated passivity, but activity, that all learning is apperceiving.

Accordingly, it cannot be the duty of the teacher simply to transmit to the pupil the material of knowledge, or to communicate to him ideas, feelings and sentiments, but to awaken, stimulate and give life to mental activities. He has to reach down with regulative hand into those quiet, private thoughts and feelings of the child in which lie his ego and his whole future, that they may rise above the threshold of consciousness and communicate understanding, clearness, warmth, and life to instruction. In a word he has to make provision that in every case the process of apperception is accomplished with as much thoroughness as certainty and judgment. Then not only will the matter taught be mechanically acquired, but it will be transformed at once into mental power; it will contribute steadily, by awakening thought and interest, to lift and ennoble the mental life.

The higher we set our requirements for the teacher, the nearer lies the objection that we require what is unnecessary and impossible, and that the process of assimilation can be worked out in the child independently, without interference by the teacher. We can grant this objection for those cases in which the pupil in an exceptional manner approaches instruction in a favorable mental temper. We admit also that very strong natures, which are distinguished by unusual inner activity, are accustomed to supply without the aid of others those apperceiving ideas which make possible the comprehension of a new object of study, since it is a fact that a genius even with bad instruction, by his own power, finds the right road to development. But no one for

this reason would make the exception the rule; no one would attribute to all children without exception what is the privilege of only a few gifted minds.

If such an over-trustful teacher, who believes that apperception, as the rule, will take care of itself, could look into the minds of his pupils while he is speaking to them, he would be astonished often at what he would find there: either no thoughts at all or entirely foreign ones, that go promenading during instruction, and wander about in forbidden ways; while in favorable cases, when the boy is taken up with the matter, the teacher would often find a grasp of the subject that differs as widely as the poles from his own. This is a state of mind in which apperception takes place superficially, or falsely, or not at all, for the pupil hears only words, nothing but words, and learns not from within outward, but is taught something superficially. No wonder if the boy is dull or uninterested in the school room,¹ when, as Pestalozzi says, "he plays with words from his pocket," and when that which he has learned mechanically is soon forgotten or when the hollow, unsubstantial mental structure collapses after the school life is over.²

This result must follow when we do not open up the innermost springs of a child's feeling, or when we neglect to

¹ The usual instruction, so little regardful of ideas already in the pupil's mind, since it keeps in mind only what is to be learned, begins to bestir itself about the necessary attention, when it is already lost, and progress has been thereby hindered.

² Herbart refers to the peculiar fact that many pupils show much power of memory, fancy, and understanding in their own sphere while little of these is attributed to them by their teachers. They even dominate as the intelligent ones in their own circle; they possess at least the respect of their playmates, whereas in the hours of study they are incapable. Such experiences betray the difficulty of making instruction take hold effectually of individual development.

awaken the apperceiving ideas for the new. Only consider what is demanded of a boy when he is held hour after hour to his task. He must forget a large part of the thoughts and feelings which he brought into the school with him from without, he must suppress the most choice and agreeable, the strongest and liveliest ideas and impulses, so as to follow the wholly new and strange notions of the teacher, or such as are little familiar to him. Even when he is interested in it, he dare not travel his own chosen road, following up the ideas called forth by instruction; but he is bound within his class limit to a definite fixed progress of thought, a certain average time of thought-movement, requiring an attention, labor, and effort of mind often felt as a burden, even by an adult. And now let one put himself in the state of mind of a six-year old little one, whose world, up to the present, has been the play-room, the street, the lawn, the garden, the field, who has tumbled about in the fresh fields of nature without care or aim; how must he feel when he suddenly finds himself placed between the four walls of a school-room? Behind him are all the joys of the playground, the golden sunshine of nature; before him, the earnest man with the serious countenance. And now he is to learn tiresome letters and write figures that have no interest for him — no wonder if, in grief, he breaks out into tears, the school-room seeming a prison to him. If the teacher does not lay hold of the inner thought-treasures of the child, leading him back in thought to the paradise of his youth, to the field of his inner and outer experience; if the teacher is indifferent whether the child gets anything out of his words or not, then he plays on an instrument without strings. The apperception of the child must not and cannot be left to blind, uncertain chance, and it must be regarded as the highest art of the teacher and educator, rightly to induce

the process of mental assimilation in the pupil, and to conduct it to a sure conclusion.

From what has been said above concerning the conditions under which mental appropriation takes place, it follows that herein the instructor must direct his attention both to the subject and to the object of apperception, both to the apperceiving ideas and to those to be assimilated.

1. PEDAGOGICAL REQUIREMENTS IN RESPECT TO THE OBJECTS OF APPERCEPTION.

(Choice and arrangement of the material of instruction.)

The object of apperception consists usually of those new and unfamiliar thoughts which the pupil has to master, the subject-matter of instruction which he has to apperceive. Of course this must answer certain conditions, if a thorough assimilation is to follow. It is manifestly insufficient that a subject-matter be selected in conformity with special scientific or ethical standpoints, and then left to the skill of the teacher as to how it is to be mastered. Anything, to be sure, can be assimilated by the hungry mind of the child, and, in the end, he would learn even Chinese if he had to. It is not only a matter of concern that something be apperceived, but that it shall take place with the greatest possible mental culture, with certainty, and without unnecessary expenditure of power. It should be so learned that the culture-content of the matter may bring about the best possible effect. To this, a well determined selection and arrangement of the subject-matter can essentially contribute, so far as regard is had for the constant, and in the course of development, also for the changing, peculiarities of child-nature, for the phases of thought and effort which dominate at different times in the pupil. The teacher therefore has to see to it that he does not treat of things for which there are

not at hand sufficient points of contact in the youthful soul, for otherwise there would arise the greatest difficulties for instruction. Out of the whole field of learning, so far as it is admissible in accordance with the moral-religious aim of education, only those materials of culture and knowledge are to be selected which are adapted to the child's temporary stage of apperception.¹

The question, what these materials are, Ziller has attempted to answer by a precept as brief as it is comprehensive, drawn from psychology and history: "The mental development of the child corresponds in general to the chief phases in the development of his people or of mankind. The mind-development of the child therefore cannot be better furthered than when he receives his mental nourishment from the

¹ Instruction therefore follows a line of the divine pedagogy. For even the exalted Educator of the whole human family is wont to reveal his heavenly truths to men only so far as they possess sufficient apperceiving ideas for them. When the time was ripe, when both Jews and Pagans had prepared the way for an understanding of the new evangel, when the longing for the Savior had been powerfully awakened, then God sent his Son. Then only could his life and teaching unfold a deeply penetrating and world-historical influence. And does not the same divine wisdom appear in the words of the Lord, directed to his disciples, "I have still many things to say to you, but ye cannot bear them now. When, however, the spirit of truth is come, he will lead you into all truth." So long as his disciples were still entangled in the views of the people concerning the promised national Messiah, the King of the Jews, the divine Master could not entrust to them the whole secret of his sending. Only when they had experienced so many things in the days of Easter, which they had neither hoped nor feared, after they had seen the Lord suffer, die, rise again and ascend to heaven, did they fully understand his person, his mission, his destiny. Now they saw him in the light of the Old Testament prophecies, apperceived fully what was at first dark, as is so beautifully expressed in the speech of Peter on the day of Pentecost.

Compare also Goethe's words: "Man understands nothing but what is appropriate to him. Hence the duty of saying to others only the things that they can receive."—*Wilhelm Meisters Wanderjahre*, Chapter III.

general development of culture as it is laid down in literature and history. Every pupil should accordingly pass successively through each of the chief epochs of the general mental development of mankind suitable to his stage of advancement." The material of instruction, therefore, "should be drawn from the thought-material of that stage of historical development in culture which runs parallel with the present mental state of the pupil." Now, of these chief stages or epochs of general culture, classical presentations give us sufficient and reliable knowledge. While we permit the child to live through in succession these narratives, belonging to sacred and secular history, we shall supply him in each period of education with that material which is best suited to him; that is, for which there lie ready the greatest number of apperceiving aids. In pursuance of this plan, Ziller has proposed a mass of sacred and secular historical material of ethical value which follows general as well as national growth in culture. He claims that this material best corresponds to the stages of apperception, and to the individual development of the child, and that it essentially furthers and hastens both.

A more pedagogically correct selection of the subject-matter than this seems in fact impossible, so far as the hypothesis from which Ziller proceeds is shown to be an incontrovertible fact. Can we assert this concerning it? Does there really exist such a far-reaching similarity between the development of mankind or of the people and the individual development of the pupil, that upon it the theory of the choice of pedagogical material can be based?¹

¹To Richard Staude is due the honor of having first subjected this question to thorough critical consideration. See Rein's *Päd Studien*, 1880, No. 2; 1881, No. 2; 1888, No. 3. See also Sallwürk's treatise: *Gesinnungsunterricht und Kulturgeschichte*, 1887.

That the individual in his intellectual development repeats the evolution of all mankind has been from earliest times a favorite thought of minds prone to philosophy. When Vaihinger, in his treatise "*Naturforschung und die Schule*" (Scientific Investigation and the School, 1889), brings forward as proof of this a crowd of witnesses, one receives the impression that a certain principle, recognized by all, must indeed underlie such a number of harmonizing testimonies from our most prominent poets and thinkers. It is an additional proof that in the realm of science, the law of the congruence of octogenetic and phylogenetic series, according to which every more highly organized being has to pass through the stages of development of its species, has long since enjoyed universal recognition. Does it not lie close at hand to presume the activity of a similar law in the intellectual realm also? To be sure the attempt to transfer the biogenetic law without modification to the realm of intellectual life "because there exists no difference in principle between somatic and psychical development"¹ must be rejected for evident reasons. But when it is shown by close psychological investigation that the development of the individual is bound, not only to the same culture-content which mankind has produced, but also that the individual, like the latter, raises himself² to ever higher culture-epochs (or stages) only by means of the apperception of that culture-matter, is not a formal as well as material analogy between race and individual development sufficiently proven?—An analogy, a similarity there surely is; is there not possibly also a parallelism between the two reaching still farther? That, however, may be a matter of some doubt. For even if the individual apperceives and appropriates the knowledge

¹ Vaihinger, pp. 14-15.

² See Capesius in *Jahrb. d. Fortsch. f. wissenschaftl. Pädag.* XVI., 149.

and experience given in the progress of human development just as the race itself did, it by no means follows from that, that this must happen in exactly the progression in which the culture-matter was gradually evolved. The case is rather conceivable that the individual mind, avoiding the circuitous and misleading paths of race development, apperceives the experience of the race according to other, and to him better suited, points of view.¹

There is the possibility that for him another equally valid, and yet far simpler and shorter path of development to the desired goal may be found, and that race development and individual development differ from one another because of various conditions. Certain facts in experience make this indeed very probable. The bearers of human development are always adults, who unite, in their consciousness, the culture-content of their age; the bearer of individual development is, in the first epochs, a child. Even though the latter may have many incomplete moral and religious intuitions, many feelings and thoughts in common with the people of an earlier epoch — he is, after all, always a child, whose thoughts, feelings and aspirations are surely separated by a deep chasim from the prevailing habits of thought of an adult. It follows from the corporeal organism of the latter that always and everywhere he will have other needs, other

¹ Thus there was, long ago in history, a perfected science of logic before the simplest events in nature could be successfully explained. But in our schools the discoveries of Galileo will be taught before the creations of Aristotle. "The study of electricity is almost entirely a creation of more modern times; the identity of lightning and the electric spark was first known in the middle of the last century. The first electro-magnetic phenomena were discovered in the twenties of this century, and yet we will teach our scholars both the identity of lightning and the electric spark, and the universal phenomena of electro-magnetism, earlier than the laws of centrifugal motion, for instance, which Huygens had established even in 1663."—Capecius, P. 162-163; cf. 168-169.

inclinations and habits, than the undeveloped child. But, on the other hand, the child of our day brings with it into the world inherited tendencies, as a result of which, certain intellectual activities become earlier apparent in it than is the case with adults of the first culture epochs, and give to its intellectual life special distinguishing features. In short, it might be a very difficult matter to find an exact correspondence between the epochs of universal human development and those of the child. One will always find that the child in some directions, — for example, as regards certain thought operations — is far beyond the corresponding culture epoch of the people, but in another direction, is far behind (consider the practical experience proceeding from occupation), so that a uniform, corresponding progress in the individual and the whole race does not take place.¹

In general, a far-reaching correspondence between the race and individual development is, after all, only conceivable by presupposing that the single mind, in regard to the chief points, and under the same outward and inner conditions, is gradually unfolded, just as mankind was, in its separate epochs of culture. The boy who, for example, has entered his patriarchal or nomadic period under the same influences of society and nature, would have to grow up in the same moral and religious habits of thought, and devote himself to the same pursuits as, perchance, the members of patriarchal families, if he were to live entirely and completely through the corresponding culture epoch. And thus in each following epoch, other conditions of life and development would have to be offered to the child, if it were really compelled to pass through in detail, and to experience in its own life, the progressive culture of the whole race. That is impossible. The child of our day is, once for all, bound to a definite

¹ Cf. Strümpell, *Psycholog. Pädagogik*, p. 189.

sphere of life, from which it cannot be separated. It grows up in the midst of abundant culture, which very nearly represents the gain in culture of *all* previous centuries. It is surrounded by far more complicated conditions of life than were presented by the primeval age, by men who, as regards their degrees of culture, exhibit the greatest differences in such a way that almost every epoch in civilization is represented by them in certain respects. The extraordinarily manifold and quickly changing influences to which the child is in this way exposed, by no means exert their force in a regular manner, as, for instance, according to the historical point of view. They are more likely to confront the child in motley order according to the needs of daily life. His mind lays hold now of this, now of that, and now again of very different parts simultaneously, and, at least in the realm of outer experience, does not advance in the logical order of a system of study, or according to regular epochs.¹ In the city, for instance, he usually learns our modern methods of business intercourse, or our highly developed industry, earlier than the simpler forms of human labor. He becomes acquainted with the Christian belief and Christian manner of thought even before the typical forms of previous religious epochs of development can be presented to him.² But if, according to that, the intellectual and bodily life of the individual is unfolded under numerous other conditions than those of earlier human races, there must also exist a decided difference between race and individual development.³

¹ Strümpell, p. 161.

² Here we do not think merely of "tales from the life of Christ, brought from the home to the school," as *Thrandorf*, nor of "externals of Christianity," as *Vaihinger* gracefully puts it. But we mean that the whole serious manner of life in a Christian family imparts to the child strong, warm and pure moral-religious ideas which exclude experience of certain-sense perceptions, standing lower down in the scale.

³ The attempt to withdraw the child artificially from given culture

The psycho-genetic law of parallelism between the development of the individual and the species, suffers accordingly a similar limitation to that of the biogenetic law in the scientific world. It is well-known that the latter holds good only for the embryo in its prenatal state.

Free embryos or larvæ, on the contrary, must adapt themselves independently to the conditions of exterior life, and can therefore not repeat faithfully the historic development of their species. The individual mind of our day is similarly conditioned. It is not an embryo, protected from exterior influences, which repeat without disturbance the race development, but from the beginning it is exposed to the effects of an essentially different environment, in accordance with which it has to conform itself. Consequently, with the child, it cannot be merely a question of a development in harmony with the progress of historical culture, but it is also with equal right, a question of adaptibility to changed circumstances, and no educational art will bring the child to the point where its culture will run fully parallel to the race development. In general, we indeed recognize a certain similarity between single and collective development; but as soon as we enter into details, our analogy is, in many cases, no longer tenable.¹ If that is the case, then, pedagogical proofs can be drawn from that analogy only in lim-

influences in order to keep it in a certain definite culture-epoch is, of itself, prohibited as a vain endeavor. Neither Rousseau's flight from the world nor Jean Paul's "subterranean education" can pass for acceptable attempts at settling pedagogical questions.

¹ Capesius, p. 182.

"The path in which we lead youth is not so firmly established in the highways along which the human race has passed, that we, the educators, may not have essentially aided in determining it by our aims and judgments; education may be a compendious repetition of the world's history; but we make the compendium in the spirit of definite ideals, which fill us."—*Willmann, Didactik I.*, 74.

ited measure. It will give us many an excellent hint for methodical work in more than one province of knowledge. But it is not such a far-reaching or deeply-rooted principle, that the study of the choice and arrangement of culture-matter could be based upon it without further thought.

Herein we may perhaps have found an answer to the question from which our investigation started, and a negative one at that. But Ziller asserts, not merely an agreement of race and individual development in general, but he insists that the child shall pass through the various stages of each epoch of culture development. Now, in opposition to this, it might undoubtedly be asserted that what was firmly established in respect to the development of the individual taken as a whole, might also be applicable to a part of this development—to that of the child. Nevertheless there might still exist even here especial circumstances which would admit of another interpretation. Let us, accordingly, see what facts Ziller brings into the field to support his assumption. He asserts that the pupil, as regards his connection with a greater community, passes through the following epochs of moral development by the aid of instruction, and must necessarily pass through them in conformity with his nature:—

1. He subjects himself, first of all, to authority in pure childish confidence.

2. His own thoughts must then move freely in that sphere which is ruled over by this authority.

3. He must subordinate himself to this authority voluntarily.

4. He must recognise and love the highest authority.

5. He must learn to work in its service toward the goal of a moral and religious culture of his own inner being, as well as,

6. For that of the larger community to which he will belong.

Certain culture epochs of the general social development seem to correspond to this development of the individual in his relation to a larger race life, as is shown with especial distinctness in the epochs of sacred history.¹

It is, first of all, noticeable in the preceding statement, that there is an effort to set forth a correspondence between general and individual development, in the province of social ethics alone. For the remaining province of intellectual life a similar proof has not been offered (except a few weak attempts). And yet, without such a one, the whole culture-epoch theory hovers in mid-air, for the idea of culture embraces more than the moral relation of the individual to society.

And then it is subject to a very considerable doubt as to whether it may be possible to establish firmly, within the moral and religious development of the child, a large number of epochs, sharply distinguished from one another. A careful, unbiased observation shows us, rather, how unsteady and indefinite the youthful mind-life is exactly in this respect, how it lacks evenness of character, and a steadfast will-power. The beginnings of all possible ethical lines of conduct are present even early in life, and those things that Ziller passes in review, one after the other, are generally limited to no definite epoch at all, but are developed simultaneously. Thus, the child that subjects itself, without reflection, to human authorities, will surely, very soon, receive a presentiment of the fact that its will is bound to the highest authority, and if it obeys — whether voluntarily or involuntarily — is it not already working here on the moral formation of its inner life in the service of this authority? Furthermore, who

¹ See the further exposition in *Jahrb. d. V. f. w.*, P. XIII. (1881), p. 118. It is expressly stated here that the culture epochs appear to correspond to the normal development of the child's mind.

could define, even approximately, the moment when the pupil passes from the first to the second epoch of development, since thus his own thoughts move voluntarily in the sphere of that which is governed by this authority? Who would be able to assert at what moment he subordinated himself to the highest authority by his voluntary act? Do not the most varied ethical lines of conduct often alternate in him, just according to his momentary condition of mind, according to the exterior circumstances, which render the moral action easier or harder for him? Do not, even with the well-instructed and well-bred child, eudæmonistic and strictly ethical sentiments dwell for a long time peaceably by one another? This inability of the childish will, this lack of uniform endeavor, does not permit us to recognize a whole line of milestones and turning-points in the path of the pupil's ethical development, from his sixth to his fourteenth year. We shall indeed be able to define, in general, the direction of the ethical progress, and perhaps in this respect (as in the sketch given on pages 66 and following) prove an essential difference between the early and the late boyish period. But the effort to fix upon six, or indeed eight ethical epochs of development for the eight school years of the public school pupil appears to us to be a fruitless endeavor.¹

¹ In an article in the *Sächs. Schulzeitung*, well worth reading (1887, p. 128, etc.), Hartmann has attempted to prove at least four epochs of development in the pupil, for the period from the sixth to the fourteenth year. But, however valuable his exposition may be in detail, it still appears to stand too much in the jurisdiction of Ziller's congruence hypothesis, for it to be everywhere true to the facts. We are, at least, not able to admit that precisely the ninth and tenth years of life is the epoch of the subordination of the individual will to an authorized general will, and that the pupil, in the thirteenth or fourteenth year, already allows himself to be directed in his action by fundamental moral ideas. Vogt distinguishes only three ethical epochs of development in the individual,

But even if it be granted that, in the future, penetrating psychological research may succeed in accomplishing the improbable, it is still a very great question whether it would define those epochs exactly as Ziller does. For it is, indeed, a matter of no doubt at all, that his social and ethical culture-epochs reach, in part, far beyond the age of childhood, beyond the school period of the public school pupil. How many men there are who do not learn, in all their lives, to submit themselves voluntarily to authority! And does not daily experience prove that love for the highest authority is, as a rule, not the prevailing sentiment of boyhood; that the instructor gladly contents himself, for the present, with a less voluntary obedience on the part of the pupil who leaves the public school, if only the idea of God has become a power in his mind? That moral freedom, then, in consequence of which man consciously and systematically works for the completion of his own ethical culture, as well as for the realization of an ideal human society, we shall never hope to find in the boy, but, on the contrary, at best only in the maturing youth and in the man.

Let us not be checked by the fact that the pupil can and must grow into higher epochs of moral development, by the aid of ideals. Certainly he can and should. But by that we still do not say that the thoughts and sentiments with which he thus becomes acquainted immediately predominate in him, and must do so as a result of instruction; that now the pupil must have necessarily attained to the same ethical

which he characterizes thus: subjection to a foreign authority, voluntary action under the authority of the law, and the independent authority or government of ideas (Explanations to *Jahrbuch d. V.f. w.*, P. XVI., p. 40). His assertion that the third epoch "comes to view" already in the fourteenth year becomes comprehensible only if we, with him, give to the concept, epoch of development, a meaning totally different from the ordinary use of the word.

epoch of development by passing, in fancy, through the highest epoch of human culture. The degree of ethical reality in the subject-matter for instruction is dependent on certain psychological conditions which no education and no instruction can permanently create. If, for example, the conditions for the sovereignty of ethical ideas, or for the moral freedom, according to our exposition given on page 76, etc., are first discovered in the period of youth or manhood, then the most valuable subject-matter before this time produces only germs and tendencies towards that moral constitution of will, but will never be able to transfer the highest epoch of ethical development into the period of boyhood, and thus essentially hasten the culture of the pupil. It is not true that the public school pupil passes through the same order of development as the pupil in the upper schools, only in a more condensed form — that is, more quickly and probably earlier. He does not pass through them any sooner, or in any shorter time, but in an abridged form, incompletely, in only a part of the stages. That will not keep us from introducing him also to the culture-matter of the latest epochs of development, in order that they may contribute to the ennoblement of his spiritual life according to the measure of apperceiving ideas at his disposal. But herewith, we say to ourselves, that we may only expect from the future, a more thorough comprehension, a deeper ethical effect of the culture-matter when he is met by the numerous inner experiences of the adult. What we mature in the pupil is, under favorable circumstances, a new apperception, or knowledge epoch, not an epoch of development.

But could not those tendencies of the will, those traces which a newly gained insight leaves behind in the moral culture of the pupil, as soon as it is supported by strong feelings, be already regarded as tokens of a new epoch of

development?¹ But that would contradict all use of language. For when we speak of the epochs of development we think, first of all, of certain dominant groups of ideas, which imprint their character upon the thought, volition and action of any given period; that is, of the sum total of new, valuable culture elements which were unfolded and developed in it. But it is assumed that the corresponding epochs of development in the individual show a similar stamp of intellectual life and aspiration, and at the same time present the best and most numerous apperception aids to the comprehension of the universal epochs of development under question. Indeed it can be positively asserted that the stage for the most favorable apperception of the culture-content of an epoch of universal development, is likewise that of the corresponding epoch in the individual. Accordingly an ethical epoch of development will be determined by the kind of moral volition which predominates in it, or begins to predominate.² Hence, the highest epoch of development has been attained by him whose moral effort is practically free, or tries to free itself more and more, from the eudæmonistic reasons for action; not, however, by the boy in whom tendencies to such freedom are present for the first time. For it is unquestionably true that more favorable conditions for the apperception of the highest epoch of development are present with the former than in the case of the latter;

¹ See Vogt in the explanations for the 21st Journal of the Society for Scientific Pedagogy, p. 30. (*Jahrbuch d. V. f. w.*, P. XXI.)

² One need not on this account, as Vogt, *Ibid*, p. 35., presents to us, "represent the epoch by the image of a fixed point or a fixed surface," but one may admit that the development of the individual is, in every epoch, completed quite gradually and includes a number of years. Indeed, as Willmann rightly observes, the growth of human power, considered as a whole, is more like a gradually ascending path than a flight of stairs.

indeed, one may say, the most favorable of all. To this is added another consideration. We saw that, with the child, indications of the most varied attitudes toward ethical conduct are shown relatively early. He need not wait until the highest stages of religious instruction have been reached to get a vague idea of the categorical imperative¹, but this conception can be awakened much earlier by the unselfish, self-sacrificing action of the parents; by the examples of noble characters, which impress themselves indelibly on his mind, and thus leave traces behind in his moral disposition. How could we, under such conditions, distinguish one epoch of development from another, were the different stages not characterized by predominating, rather than isolated states of will? The fact therefore remains, that knowledge epochs are not also always epochs of development in the historical sense, and that the boy does not attain to the highest form of the latter before his fourteenth year.

But if it be firmly established that, for most pupils, the last epochs of individual development lie far beyond the school period, and if the culture-matter for each individual epoch of development is to be taken from the corresponding culture-epoch of the people, — then certain subject-matter, and indeed the most valuable and indispensable, *may* not come up at all in the public school.² That might be justifiable perhaps in the province of theory, but never in the practical province of moral

¹ The Categorical Imperative as developed by Kant may be stated as follows: "So act that, through your own will, the rules of your conduct might become universal laws." In other words, if you want a test for your conduct, universalize it, imagine that everybody acts in the same way, then see if you could approve the result.—*Ed.*

² Ziller says: "The subject-matter for moral culture is expressly based upon the correspondence between the two lines of development."—*Allg. Pädagogik*, 2nd edition, p. 217.

and religious culture. For even if the pupil of the public school can not be conducted to the heights of art and science, still nothing must be lacking that is essential to his recognition of what is necessary for the happiness of the soul. He must also be led toward the ideal of a pure moral character. But here arises the necessity of his entering into maturer thoughts and purer sentiments, into such healing truths, as only the last and highest culture-epochs of his people have to offer him.

We have seen that between the development of the individual and that of his people, or humanity, there exists only a relative, not a complete correspondence. Education will accordingly have to take into consideration the great differences existing between the two lines of development, and especially will it have to establish firmly the succession of culture-matter, but not exclusively and without further ceremony, according to the course of historical culture.

It is further proven that the moral development of the pupil, even with the best of instruction, does not close with his fourteenth year. Consequently the childish development — at least in the province of ethics — passes through only a part of the culture epochs, and for this reason, therefore, the selection of material for study cannot be based on the asserted correspondence of race and individual development, for otherwise the most valuable culture-matter would have to be withheld from the public school pupil.

Against these conclusions it has been urged, in a sorrowful tone, the consideration that "it is always the public school alone that is kept in view"; that naturally the public school in its limited scope can "exhibit but very imperfectly" the path of culture and that it must consequently treat the development epochs in part too early. But from that the unreliability of the culture-

epoch theory would not follow. On the contrary, the theory would have strict validity for higher schools where there is more time at disposal.¹

In reply to this, we have the following to offer. — If Ziller in the exposition of his theory of culture epochs keeps solely within the boundaries of the public school, it becomes the duty of the critical examiner to follow him in this province of experience, and there, first of all, to investigate the validity of his principle. Indeed, it is here alone that his opinion could be ascertained with some certainty, and the practicability of his theory be tested on a given pedagogical subject-matter. We hold with Ziller, that the highest principles of instruction must always be considered as universally valid, equally applicable to all schools and ages. If, then, it can be rightfully said concerning so important a principle as that of the selection and arrangement of the subject-matter of education in general, that it is really only applicable for higher schools, the principle must appear inadmissible from the very beginning. A principle that is perfectly valid only for the upper schools and allows the work of the public school to appear in so unfavorable a light, cannot be recognized as the highest, universally valid, educational law.²

But suppose its asserted validity were denied, even for higher schools? According to Ziller, the subject-matter of education is always “to be borrowed from that culture development which is parallel to the pupil’s present condition of mind.”³ Ziller demands, that, wherever possible, every

¹ Thrändorf in *Jahrbuch des V. f. w. Päd.*, XII., 709.

² If, according to him, subject-matter is treated “too early” in the public schools, it is, of course, not in its right place, and a sound pedagogical principle should not admit at all such premature work. But if that matter can in reality be treated, then it has evidently nothing to do with the theory of culture epochs.

³ Ziller, *Allg. Pädagogik*, 2nd edition, p. 260.

culture-epoch shall be presented to the pupil at the moment when his whole attitude of mind, natural as well as acquired through instruction, guarantees an apperception of the new as nearly perfect as possible.”¹

A given topic, therefore, should not be presented until the moment when the pupil has reached the corresponding epoch of development; for not until then will he, as we saw above, apperceive most perfectly new thoughts and aspirations. Not until this time is his stage of mental development abreast of the corresponding culture-epoch.—But the highest stage of development, that of moral-religious freedom, comes with most people in the more mature period of youth or manhood; a fact which, for evident psychological reasons, will not greatly alter the best curriculum of studies. For as long as the pupil still stands in complete outward dependence upon others, his actions will be naturally caused by eudæmonistic (even if not ignoble) motives; as long as no responsible occupation places him in the midst of the battle of life, he lacks in great measure those inner experiences, doubts and needs such as are presupposed by the last period of religious development; in other words, he lacks the best apperceptive aids to a final adoption of the highest religious truths.²

As a consequence, according to the strict requirements of the principle, the presentation of the culture-epochs would have to be extended past the period of youth, and until then certain culture-matter would have to be kept from him.

¹ Thrändorf, *Jahrbuch des V. f. w. Päd.*, XII., 109.

² “According to the inner psychological nature of everything ethical in character, knowledge and actions mutually condition each other; moral maturity and elevation of spirit are never attainable without active, personal experience of life. Not only for, but also through conduct, is moral sense developed.”—Lazarus, *Das Leben der Seele*,” 3d vol., p. 103.

Futhermore, according to Thrändorf's method,¹ matter of the highest ethieal epoch, the life of Jesus and the history of the Apostles, would have to be treated at the middle period of the upper school, and thus at a time when "these phases of religious truth do not receive the full and conclusive estimation due them," but could be apperceived only in the spirit of the second stage of mental development.²

Here, too, then, even if not in the same degree as in the public school, there is either a premature presentation of culture-matter, or the necessity of withholding it from the pupil until past the school period. This shows us quite plainly that a striet carrying out of the culture-epochs is not possible in any of the existing schools, because the pupil does not pass through so many epochs of development that the matter of the separate culture stages could ever be added to a related, that is, the corresponding individual epoch. And only in so far as one gives up this requirement—which is, to be sure, the essence of Ziller's theory—will that theory ever be reeognized as applicable. The thought of arranging the subject-matter of instruction in genetic order must be regarded, not as a sole and universally valid principle, but one to be taken into account along with others.

If, according to this, we cannot deduce directly the child's stages of apperception from a universal psychological and historical proposition, nothing remains but to settle the question, propounded above, by a minute investigation of the conditions under which the subject-matter of

¹ *Jahrbuch d. V. f. w. P.*, XX., 106.

² To be sure, Thrändorf thinks that that would exactly correspond to the different interpretations which Christianity has found in the course of time. But the pupil is not here for the purpose of living over again the retrogression of the human race from biblical to mediaeval Christianity.

education will be apperceived in the best manner. First of all, it is indeed clear that the matter to be taught must on the whole lie close to the child's experience. Since the latter has its root in the home soil, the material of the studies must be taken from the national treasures of knowledge, or at least stand in close relation to national interests, sentiments and ideas. It must, to be sure, be subject-matter that apparently transfers the child into unknown regions, but yet in reality leads it back to the realm of its most familiar ideas, its daily needs and experiences. Such a choice of subject-matter presupposes a thorough analysis of the sphere of national thought, an exact knowledge of the lasting and permanently valuable possessions of the national culture.

But from the nature of the latter, all cannot be presented to the child at every period and in like manner. We have already seen how the pupil's gradual development puts limits to the application of a pedagogical principle that cannot be passed over with impunity. As the compass of its outward experiences arrives at a certain completion only after the work of years, so also does the breadth of its consciousness, the power to grasp and retain ideas as a whole, increase but gradually. The epoch of development in which the child is able to think only in pictures is followed by another in which it really gives him pleasure to lift himself in the abstract above the confusing variety of individual objects up to the universal law, that is, to rule and concept.

From the fanciful he advances to the real, from an imaginative to a sensible and intelligent conception of the world. Many things that at first seemed to him historical facts, later on become poetical images. Certain experiences and conditions of mind—consider, for example, the complex of æsthetic feelings that arises from contemplation of works

of art, the thoughts and feelings pertaining to the sexes, the interest in difficult political questions of the day, do not present themselves until the close of the youthful stage of development. Thus the pupil's power of apperception is a constantly changing one, according to scope and nature of the experience obtained outside the school, and the stage of intellectual activity to which he has attained. But instruction must pay attention to this law of child development when choosing its subject-matter, in order that it may correspond to the changing power of conception, to the experience and interest of the pupil. Matter must not be offered, the comprehension of which demands certain necessary outer or inner experiences which are at the time still wanting and must be wanting, or the form of which presupposes a higher and more mature intellect than the pupil possesses. It must, however, first of all and principally, treat of that which lies nearest to the experience of the child. It must correspond to the epoch of mind arrived at, in order by means of this subject-matter, gradually to lift the child above that epoch.

However important in general the foregoing didactic regulations for the choice of matter for instruction are, they evidently do not attain to the solution of the question as to what portion of instruction is to be allotted to the separate school years, and as to how this should be divided and arranged for the whole period of school life. If we take into consideration merely the fact of the development of the child's mind, we gain for the period from the sixth to the fourteenth year, not the desired eight epochs of apperception, but at the most only two. This fact suggests, however, that these various epochs do not depend exclusively upon the unchangeable factors given in the child's development, but fully as much upon the nature of the subject-matter offered by instruction. They are not something exclusively innate, but

can be, in a measure at least, artificially produced. Or still better, within the stages of the child's mind that are determined by fixed laws, instruction is able to create epochs of apperception, in accordance with the given psychical conditions, just as surely as the ability to apperceive depends essentially upon the range of thought already acquired. The power of apperception, however, is produced through instruction by means of such an arrangement of the teaching matter as will make the sequel intelligible from what precedes, "so that every previous subject best prepares the mind of the pupil for that which succeeds more or less closely."¹ That is brought about most naturally and perfectly by following the historical principle, by grouping the material with reference to the historical development which a definite phase of national thought has taken. "Especially does what goes before in a given subject contain the key to what follows, and following up the development of a subject leads most simply to an understanding of it."² While the child follows the progress of national culture or the facts of sacred history from epoch to epoch, it receives indeed in each of these stages numerous ideas that prepare it for what is new in the next epoch.

Everything that is learned in one epoch serves at once as a powerful aid to the understanding of what follows in the next higher; that which has become, explains that which is becoming. A happier arrangement of material for the purpose of the most thorough and many-sided apperception, can scarcely be imagined. With its aid, it would seem that

¹ Herbart, *Psychology as a Science*, II., 226; Stoy, *Encyclopädie*, p. 67, 81. What is true in the oft quoted and oft misunderstood phrase, "Let all instruction advance without break," receives in the above requirement its due.

² Willman, *Didaktik als Bildungslehre*, Vol. II., 214. Cf. also Kármán in Rein's *Päd. Studien*, 1888, p. 201.

subject-matter can be assigned to each school year, for which the most favorable conditions for apperception are, relatively speaking, at hand, and through which certain epochs of apperception can be created within the limits of the capacities of child mind.¹ In the choice of matter according to historical points of view we discover all that is justifiable in Ziller's theory of culture-epochs.²

Finally, the apperceptive power of the pupil can be increased by the sequence of topics in the various studies; so it can be also by the right choice and arrangement of

¹ These, nevertheless, do not always coincide with the actual periods of development in the mind of the child. The latter, rather, comprehend several of the former in themselves; the pupil, too, will not "pass through and experience" the culture-epochs, in the strict sense of the word, but only busy himself with them, in order, as vividly as possible, with the aid of fancy, to picture them to himself as historical facts, to understand them thoroughly, and to unite them with the feelings of hearty sympathy. If such a thorough and sympathetic grasp of the subject-matter of the studies can be called "experiencing" it we have no objections to make.

² That which is untenable in it will be hidden from many by the ambiguity of certain universal concepts. For example, the defence is made that Ziller only asserts a correspondence between individual and race development — "on the whole" — but there are deduced from this exceedingly indefinite expression very comprehensive, definite, and therefore far-reaching conclusions. First of all, the parallelism (or more recently, the analogy) between the development of the race and that of the individual is touched upon, in order, without further ceremony, to substitute *pupil* for *individual* where pedagogical conclusions are to be drawn. The concept "epoch of development" is used just so long as one moves in the universal, abstract requirements of the theory. But as soon as one descends to the concrete facts of the school practice, that concept receives in a twinkling quite a different meaning, that of the apperception epoch. And now one can indeed willingly grant to the defender of the theory that in general the culture-matter is best apperceived if it is presented in historical sequence. But if *that* is to be the essence and real meaning of the theory of culture epochs, wherefore the lofty words about the two developments that run fully parallel with one another, which in their chief stages must correspond perfectly? Cf. *Jahrbuch d. V. f. w. P.*, XXI., 165; Ziller, *Allg. Pädag.*, p. 216.

that which is carried on side by side; in other words, by the proper coördination of studies. It becomes clear that a simultaneous treatment of the same topic in different subjects according to several points of view, or the introduction of closely related objects and facts, must essentially assist mental assimilation. Then the ideas and interests gained from the one province of knowledge affect the related provinces as apperceiving powers which fix the new in consciousness as something relatively familiar. They assist understanding, because they constitute in some cases the conditions of apperception, and in others a sufficient explanation of enigmatical phenomena, thus helping to complete the apprehension and insuring a more fundamental grasp of the subject. But they do this so much the more reliably, in that they appear, not years after when obstructed by other and totally different ideas and interests, but at once and with undiminished force. Thus arises that harmonious state of thought and feeling which, like the right mood, is especially favorable to the assimilation of knowledge. Accordingly there is to be recommended such a choice and arrangement of studies that at each stage the largest possible amount of related matter may be treated at one time, and thus be brought into a unity in consciousness.

Let us now sum up briefly the requirements that have revealed themselves in reference to the object of apperception. In general this direction holds good: Offer to the child always that knowledge for whose thorough assimilation the most favorable conditions are present or easy to create.

How can this be done?

1. Such materials of knowledge must be chosen as lie close to child experience in general, and likewise to the consciousness of the people, *i. e.*, the subject-matter of national culture.

2. They must, as regards content and form, take into consideration certain peculiarities of the child's intellectual development.

3. They are to be arranged in such a manner that every topic shall create for the following ones numerous strong aids to apperception; *i. e.*, according to historical sequence (Law of Propædæutics).

4. The various parallel subjects of the curriculum are to be arranged in such a manner that in each grade as many as possible allied topics may be associated, so that what is related in fact, may be related in the consciousness of the child (Law of Coördination, or Concentration of Studies).

In so far as the simultaneous realization of the foregoing requirements does not meet insurmountable difficulties they may be regarded as valid. And indeed in most cases they will support and confirm one another. Yet the possibility is by no means excluded that one or the other requirements will clash with the rest. Certain material may be chosen in accordance with the historical principle, which in content and form expects too much from the child at a certain epoch of his development. Or the unequal rate of historical progress in the different branches does not admit of a useful concentration in the instruction. And the case is also conceivable that, in the realization of the third and fourth requirements, the intrinsic value of the subject-matter for instruction might not receive its full due. In all these cases it is advisable to limit one requirement by another, as far as is necessary, and not to lose sight of the chief principle while considering special applications. This refers to the last two directions; while the first two, which have reference to given, unchangeable facts, can not be subjected to any limitation. It does not lie within the province

of this discussion to sketch a complete curriculum of studies in accordance with the foregoing principles, even for one grade of school. Only a few practical conclusions may be permitted to us in connection with these general requirements.

If we ask what historical subject-matter for moral culture must at all events have a place in the scheme of instruction, not merely for moral and religious, but also for psychological reasons, we find that custom ascribes the first place to stories from the Sacred Writ. And properly, too. For its figures stand close to the consciousness of the people as very few others do; its thoughts are bound up with our most sacred feelings and convictions. As long as our people see the source of their belief in the Holy Scriptures; as long as they, like their fathers, are edified by the examples of its holy men, just so long will biblical views and sentiments, biblical thoughts and precepts — even in the language peculiar to them — constitute the essence of our national thought. However remote they seem to be from our country, the Scriptures are still the basis of the national culture in the best sense of the word. That they must stand in the foreground of public school instruction, is the universal agreement of the German people. Only in this do opinions differ, — the order in which they shall be presented, whether in concentric circles or in a straight line; whether sacred history is to be brought forward only once according to the chief points in its epochs, or whether each story is to be offered repeatedly.

The law of propædæutics undoubtedly demands progress according to historical points of view, a gradual traversing of the matter in accordance with the historical course of biblical development. This manner of procedure offers the opportunity of always bringing before the child great

connected epochs of history.¹ Then the pupil will not be constantly thrown from one sphere of thought to another by means of numerous isolated stories, but the inner connection that exists between the personages and events of the same sacred epoch, the similarity of exterior circumstances accompanying them, of geographical surroundings, of customs and usages, of the conditions of life and the like, make it possible for the child soon to feel at home in this world, otherwise strange to him. There are indeed the same religious sentiments and intuitions, the same social affairs and customs, the same planes and conditions of culture which are constantly recurring in the various stories. And how often and naturally is opportunity given for comparisons, for looking backward and forward, for the perfecting and repetition of what is already learned! The instruction advances constantly and yet gives nothing completely new. In a word, closely related historical matter creates in the numerous related ideas that it awakens the most favorable conditions for their successful apprehension. In addition to this, religious instruction that progresses according to epochs of history gives the pupil sufficient time thoroughly to absorb and appropriate the subject-matter. It is not of importance to the child to "go through" the subject in two or three years at any cost; that the knowledge shall surely become the intellectual property of the pupil during his school life is the important thing. By going forward so slowly, a thorough mastery of the individual stories is rendered possible. The child gains time, not merely to grasp firmly the

¹ Our school programs, often suffering from the diffusion of instruction, appear to be in especial need of such important, unitary classic matter. Indeed Geibel, to whom we owe so many encouraging words about moral education and instruction, sees in the motley array of these programs, and the hasty treatment of heterogeneous matter, a backward and harmful tendency of our modern culture.

sacred events *per se*, but to make for himself a clear picture of their historical background, and to see the conditions of human action. We can seek to follow the motives and intentions of the acting personages, to recognize their feelings and thoughts, and thus gain deeper understanding of historical events. By entering thus into strange manners of thought and aspirations, the child now cultivates an intercourse with historical personages from which a strong sympathetic fellow-feeling, a lively interest, readily arises. It is our conviction, resting upon years of experience, that such a deep, cheerful grasp of sacred history is not possible in the restless haste with which instruction usually advances and is compelled to advance according to "concentric circles." And even this fact, confirmed by many conscientious teachers, that the essential content of sacred history can never be assimilated by the tender youth in two or three years, and much less infused into heart and disposition, argues an extension and lengthening of the course in biblical history, and a laying aside or modification of the concentric circles.

To be sure, in defense of the repeated appearance of the same historical matter, one may argue that the lesson will tend to become more firmly impressed on the mind, and that the right understanding will perhaps reveal the second time what remained obscure to the child at first. But we fear that though in this manner it is perhaps more firmly impressed (and mechanically at that), it is not apperceived any better. For it is a psychological fact that a mere superficial grasp of the new usually kills the interest in it. What one has learned once, but not rightly, has too little attraction and too many known elements to be able to hold the attention long. The right apperception is lacking, or a very superficial apperception is accomplished,

not because the subject-matter offers too much that is new, but because it offers too little. Jean Paul remarks in one place, when looking back at the restless traffic of the great city: "We become indifferent to men only when we see them often and not rightly, when we associate with many without becoming rightly acquainted with *one*." Might not that hold good also with historical characters, who hasten, according to the "concentric circles," in motley array every year or two across the threshold of the childish consciousness? Does not many a pupil become frightfully indifferent to the ideal figures of biblical history and to those of his country because he had intercourse with too many, one after the other, without "being rightly acquainted with any one"?

Rather assimilate one subject once, but thoroughly, than busy ourselves with it repeatedly, but without deeper interest! That which is to become a power in the pupil, and to be closely welded to his most cherished thoughts and feelings, must not pass hurriedly and unconnectedly before his soul like the images of a kaleidroscope; it must occupy him long and uninterruptedly.

The more thoroughly and successfully the pupil enters into the religious epochs of development, the more does a further reason for the superiority of the instruction that advances in a straight line assert its value;—everything that precedes prepares the mind of the pupil for what follows. Indeed often the religious views of earlier epochs of sacred history furnish the key to an understanding of the later epochs of religious life, such as the great deeds of the divine Teacher. The Old Testament has especial value as a necessary epoch, preparatory for Christianity as a discipline essential to a reception of Christ. "The pictures of the Old Testament become prototypes to those of the New. In

Israel's priesthood, in its kingdom and its age of prophets, is concentrated the Old Testament prototype of Christianity.¹ Through these types the Old Testament becomes likewise an elementary school for the comprehension of Christ and his works. How could the holy work of reconciliation be presented more clearly or in a more plastic manner than by the whole sacrificial service of the priesthood; how could the all-embracing position of Christ as Lord be expressed to his disciples and to the world more comprehensibly than by the image of the King in the realm of God? Therefore the New Testament speaks almost entirely in Old Testament figures, even when it speaks of New Testament matters. — The New Testament cannot speak otherwise than in Old Testament language; for the Old Testament is the lexicon of the New: from it are borrowed the words, figures, ideas, — the whole language, but everything in spirit and in truth filled with that life, the shadow and prototype of which is in the Old Testament." If that is the case, then the pupil who by a longer study of the Old Testament stories has been made intimately acquainted with their contents and spirit will evidently enter most deeply into the instructive matter of the New Testament; at any rate, more easily and surely than the child that has been led in quick course through the most varied epochs of sacred history, and in whose mind the most diverse religious conceptions have been already mingled.

If, from the reasons just presented, the arrangement of biblical history according to historical principles, appears the right one, it still behooves us before we finally decide, to test some considerations in opposition to our assumption,

¹ See the beautiful and convincing proof of this in Max Frommel's *Charakterbildern zur Charakterbildung*, from which we have cited the above passage (p. 38, etc.).

which are deduced from other and not less correct principles. It is said that our arrangement of matter does not take the child's power of comprehension sufficiently into consideration, that it offers certain stories at a period when the proper capability for apperceiving them is not yet present. Now, it may indeed happen that at the time the child may lack either the necessary inner experience or the required maturity and keenness of judgment for the deeper comprehension of certain historical facts and sacred truths. But instruction according to "concentric circles" does not remove this difficulty.

For we have here to do with conditions of apperception which do not make their appearance suddenly, in a day, or even in a year or two, but which are to be looked for only after a much longer time in the next stage of development. Accordingly that for which the child is not yet mature enough will have to be treated, not in "the next course or concentric circle," but much later, perhaps at the end of his school days.

It is therefore advisable, at all events in the last year of school, to follow the instruction in biblical history, for the purpose of connection, with a repetition of the Gospel, together with supplementary biblical and poetical selections to fill out the previous omissions. But much of what is thought too difficult for certain grades is, however, to be included in those matters, the ability for the apperception of which can be formed in the recitation, if the teacher will avail himself of the advantage presented by an arrangement of the selections according to the law of propædæutics. The instruction approaches this in so far as it follows the course of the unfolding of the Gospel, proceeding essentially from simple, easily understood conditions and religious truths to more complicated and difficult ones. This is in

imitation of the Divine Teacher who likewise has raised mankind only gradually from incomplete notions to riper knowledge. By this is not, however, to be understood that we detain the pupil purposely in erroneous, specifically Jewish ways of thinking; much rather should such religious prejudices, when encountered by the child in the Bible, find their correction through reference to the Christian conscience of our own time. By such a course we are enabled to present to the children the divine truths in such a sequence as corresponds approximately to their successive stages of spiritual maturity. We can announce the great divine secrets, as they reveal themselves in the work of redemption through Christ, to the pupil at a time when a sufficient measure of inner experience has prepared in him the right receptivity for them.¹ Is not that taking sufficient account of the development of the child? Enough, — we are not afraid that our course of instruction will reserve for a time too much of the actual facts of the Gospel. We admit readily that the first stories of the Old Testament are not appropriate to begin with. We have Bible stories, the facts of which lie much nearer to the religious conscience of the people and the experience of the child; *e. g.*, those stories of the New Testament whose content the child has learned to know and love, or at least for which a lively interest has

¹ Nothing is indeed so apt to close the child's heart against divine things as a too early introduction to their knowledge. But what deep secrets of the Christian faith are only too often discussed with young children who lack entirely the experiences necessary to understand them! What can result but verbalism, which fastens itself like mildew on the youthful spirit? The understanding ear of course at length reach the verbal meaning of most of the teachings of the faith. But for real appreciation, for actual conviction, there is need of the help of a soul in whose own experiences the word of Scripture finds a clear echo. And for such spiritual comprehension of the sublimest secrets of our faith we should indeed grant our little ones the right time.

been roused in him through the chief events of the church year, and more particularly the festivals. For the solemn celebration by the church of those important days, the popular customs at the various festivals, all the small and great joys that they are wont to bring to the simple-minded youth, are so closely bound up in the heart that in and with these joyous memories the child brings with him into the school strong and lively apperception helps for more than one group of Bible stories. Now just as the Christian father does not neglect at Christmas time, under the bright rays of the Christmas tree, to open the eyes and hearts of his children to the meaning of the day through the simple narration of the Gospel of Glad Tidings, so the teacher, rightly and with success, will also announce even to the little ones of the first grade the joyful message of the Christ-child. He will, in connection with the child's own daily life and experience, and with the usages and customs of the neighborhood, make the journey with him in the course of the school year, up to the main events of the church year, and in this way give the chief days the right religious meaning; he will associate the sacred stories with the strongest and most joyous memories of the little ones. He will further lead the interest of the children from those stories as the starting point to the life and work of the Saviour; he will relate to them how the dear Lord went about doing good everywhere, healing the sick and blessing the children, and in this way he will teach them to love Him as the best friend of man. Thus at the very opening of the sacred history appears a group of stories which, being connected by the unity of their content and carried through the church life of the present, are best calculated to meet the interest of the little folks. It is not only psychologically possible, but we are morally bound, to begin the religious instruction with the little ones,

and that, too, in the course of the first school year. Whatever is, in future, to be a power in the child, must from a very early age grow up with his thinking and feeling.

Accordingly, when we at first anticipate the connected history of the Gospel with stories from the New Testament, and then in the next grade follow the church festivals and treat such stories further, although also partly for edification; when we still further decide from pedagogical motives on another closing recapitulation of sacred history in connection with Bible reading, all this shows that the *historical principle* cannot prevail without modification, but must suffer a restriction from another equally important principle. To be sure, the objection that once going over the chief points in the history is no warrant for the permanent retention of the matter, is not able to shake that principle. For it is quite in accord with the latter to pass over and live through the Bible stories again and again — to be sure not in the form of mechanical, arbitrary repetition, which is sure to be followed by weariness, but rather in the way of thoughtful and thorough comprehension of the meaning. In so far as on principle we ask ourselves, when we take up any new topic, what known ideas from earlier stories can be used for the purpose of comparing and filling out, confirming and illustrating the important facts and truths contained in the story; in so far as in this way we put the newly learned everywhere in relation to the earlier acquired religious thoughts of the child, we impress upon him the facts of the Gospel history, if not in a better way than that of instruction in *concentric circles*, at least in a manner leading to results quite as lasting. Such explanatory repetitions have, besides, the advantage of not appearing to the child as such, and therefore keep off the oppressive feeling of mental stagnation. They furnish opportunity, further, of setting such parts

of the history as could not at first be fully grasped by the children in the light of other facts at a later time, and thus securing for them a complete understanding. In this way the culture quality of the harder parts of the Gospel certainly secures due treatment, and it is not to be feared that, as Dörpfeld¹ says, "the ideas of the great personalities of the Old Testament especially will remain entirely too childish."

Finally, we have still to consider how the religious instruction (of the public schools) can best satisfy the demands of the fourth of the above named principles, *the law of Concentration*, in relation to choice and arrangement of the subject-matter. It of course goes without saying that in its own field this instruction must not separate and tear apart what naturally belongs together. It must not let Bible reading, Bible quotation, Bible story, catechism, and religious hymn go their own separate ways. That would amount to deliberately dissipating the child's thoughts and purposely making the learning more difficult. Religious instruction is, on the contrary, a connected whole, and its basis in all the grades is biblical history.² From the facts of the Gospel, the child gains under the direction of the teacher these moral

¹ Rector F. W. Dörpfeld of Ronsdorf near Elberfeld-Barmen in Rhenish Prussia.

² Römpler expresses himself in the same sense in his *Manual for Teachers in the proper Treatment of Biblical History*. He regards it as quite proper even in middle and upper grades to base all the religious instruction on that in biblical history (p. 12). For the instruction in biblical history furnishes in connection with certain didactic portions all that the children of the public schools need in the way of religious and moral culture (p. 23). Especially noticeable is the proposition to substitute the name "Religion" in the Roster for all classes, since it would consequently be left to the discretion of the religious instructor, whether in his recitation to-day or to-morrow he makes use of a story or a proposition or the contents of a whole book in the Bible, etc., provided only he cover the prescribed ground (p. 12).

and religious truths as they are laid down in church creed and Bible proverb; and the exalted, pious frame of mind gained by earnest absorption in biblical history finds its permanent expression in the religious hymn. Proverb, catechism, prayer and hymn are the blossom and fruit of *one tree* — the story of the Gospel. And, as little as blossom and fruit can be thought of without the stem or trunk that bears them, so little can those forms of religious instruction, in the public schools at least, be separated from the historical ground on which they grew up. To put these into the closest connection with one another and with biblical history means to prepare for them the best helps to apperception. On this account the course in biblical history should control the choice of the other religious matter connected with it. In particular, no teacher, if he prefers the historical to the systematical method of instruction in the catechism, ought to be prevented from following his conviction, provided only that the scholars are brought to an understanding and into sure possession of the prescribed amount.¹

In the above we have given the instruction in biblical history a relatively detailed exposition, in order to show as plainly as possible by one example how we mean to realize the four fundamental principles relating to choice of matter and its arrangement, and how each is modified through the others. Now, then, we can be brief in speaking of the other subjects of the course.

Of the secular subjects, the German popular fairy tales have rightly found an abiding place in school instruction. They have great national educational value, since they reflect

¹ Whether the religious instruction is to be brought into relation with the other subjects of instruction and in how far this should take place cannot be discussed here.

the thoughts and feelings, the *naïve* view of creation characteristic of the youthful period of our people, and since they disclose the noblest traits in the souls of the people — fidelity and moral purity. Above all they are in sympathy with the child's way of looking at things, — his yearnings and feelings. The persons in the fairy tales belong to the simple conditions of the village or small town, and where kings and princes enter into the story, the court life is represented in a very childlike manner. In general these people think and feel altogether like children. This shows itself no less in their simple humor than in the judgment of others' motives and intentions. Just as the child knows only good and bad people in his intercourse, according to the sympathy or antipathy which they inspire in him, so also in the fairy tales the persons are either good or bad. In them the impatient feeling of justice so characteristic of young people is always satisfied. We see even here on earth in these tales the good rewarded and the bad punished. The fairy tale lingers with especial fondness in the animal kingdom, in this respect corresponding exactly to the childish inclination that loves best to regard animals as playfellows. And just as the little folks lend them human thoughts and motives, so also the fairy tale makes the grim bear, the voracious wolf, and the cunning fox appear in the story as equally privileged companions of man. Neither the child nor the fairy tale have any definite consciousness of time; therefore it says so often: — "A long time ago there lived —," "Once upon a time —." And space, too, presents no bounds to their imagination, for there is no definite place, no definite scene of action named; but house and yard, garden and field and woods, where the child is at home, are the external world of the fairy tale. What lies beyond the dark woods belongs, alike for child and fairy tale, to the realm of the mysterious

and wonderful. And it is precisely the wonderful and the magical that both love. The critical understanding does not yet make itself dominant and seek after the causes of things and events, distinguishing between the possible and the impossible, but the imagination has full sway. The imaginative view of the world is common to both. Accordingly the fairy tale must be considered congenial matter for early youth and must be assured of a preferred place at the beginning of school instruction.¹

The fairy tale is followed by the heroic saga. This acquaints us with that stirring period, when German power and spirit for the first time step forward in the dawn of history and maintain themselves victorious and glorious in the struggle with the mighty powers of nature and with foreign peoples. Their gigantic figures still live on in the mouth and heart of our people, expressing their own strong points and weaknesses with especial vividness. Since the saga treads earthly ways more than the fairy tale and turns with preference to human figures and deeds, as it connects its tales with definite persons and places, and not seldom mingles with these some real historical facts, so it forms the natural transition from the fairy tale to history; it carries over the imaginative view of the world characteristic of the child into the rational.

¹ It is here presupposed that a pedagogically wise choice has been made from the multitude of available tales. — It is not seldom that one hears the opinion expressed that those meritorious collectors and rehearsers of the German popular fairy tales, the Brothers Grimm, were quite far from ever intending to present in their book for young people a new material for culture and instruction. This is contradicted most directly by an expression of Jacob Grimm's. On New Year's day, 1813, he sent his friend Wigand his little book with the words: "Your children will learn a great deal out of the book, I hope. *It is our definite purpose that the book shall be regarded as an educational one.* Only you must wait till they can understand, and *then you must not give too much at once, but little by little, always a crumb of this sweet food.*" — *Deutsche Rundschau*, 1885, pp. 55, ff.

And still another, an ethical quality, makes it appear a specially appropriate matter of instruction for the growing boy. Experience teaches that not all moral ideas unfold at the same time and in equal measure in the human mind; that rather at certain periods one or another exercises a kind of predominance over the rest. We have already seen how, for example, in every one the idea of inner freedom (*i. e.*, the ideal of a will that guides itself not according to subjective reasons, sensual feelings of pleasure or pain, but without exception, strictly according to the best objective insight) reaches realization only relatively late. Even the hearty affection and devotion to a person, such as we often notice touchingly exemplified in children, is still in the most cases very far from pure, disinterested benevolence. One idea, however, rules without exception in the boyhood of every one, and that is the idea of perfection, or, better, there is one yearning in the mind of the boy — that of the exercise of power, the joy in the strong will, and the adventurous deed. Visit the play-grounds of our boys. Nothing but exceptional strength, bodily vigor, and an energetic will are of any account here. Whoever in the military games and wrestling matches is always victorious, by reason of bodily strength and intellectual superiority, is obeyed by the whole crowd; the weakling, however, or lax character, let him show ever so much good-naturedness and agreeableness, does not gain recognition. Pestalozzi, provided with all the best qualities of the heart, but dreamy and awkward, was teased by his playfellows as “Harry Wonderful of Foolsdom”; while the determined and skillful grandson of Astyages on the other hand was chosen by the Medean boys as their king. With what joy do the young listen to the tales of the glorious old heroes of the early days! They are certainly not indifferent to the gentleness of temper and purity of mind that

is so praised in them; but what excites them the most, what pleases them beyond all, is still the tremendous power and the defiant courage. Moreover, the child does not have at this time an equal receptivity for all ideas; he must first live through his period of force and have his hero, with whom he fights and suffers, on whose will his own grows strong and matures. Let us then not begrudge him such an ideal, but let us give the saga the place that it deserves. The epic should form the beginning of the instruction in history. For this is just what rouses a multitude of apperceptive aids in the boy when it sings of the deeds and victories of human power; when it tells how a strong will overcomes even giants and goes forth undaunted out of years of disgraceful imprisonment. The boy needs a hero that he understands, for whom he has a warm interest, and whom he can emulate—then give him at the right time his Siegfried and his Dietrich, that their example may light him onward.¹

But what is true of the German saga may surely, one would think, be maintained also in regard to the Hellenic sagas, the history of Achilles and Ulysses. Indeed they reflect the same period of civilization and correspond to the mental constitution of youth as few epics do, so that they have not seldom been preferred in school to our own heroic sagas. But the latter are certainly nearer to the individuality of a German boy than those of the Greeks are. For they are the heroes of his people, speaking his language, living in his country—are the bold heroes into whose world of thought and deed he has already been introduced by the stories of the neighborhood, the castle-ruins gray with age, the knights' armor and weapons, popular belief and legend. All these of themselves attract the individuality of a German

¹ Zillig in *Jahrbuch des Vereins für wissenschaftliche Pädagogik*, XVI., p. 39.

boy.¹ But how different is it in the case of the Homeric sagas! Strange names and figures, strange customs and habits, an entirely different landscape with its peculiar flora, all these prevent a full appreciation of the elements of those sagas which otherwise are so beautifully adapted to mental constitution of the young, because they render the apprehension of the new, difficult to the boy who has to be made to feel at home in the prehistoric period of Greece. It follows from this, that the German boy is to be introduced first of all to the national epics, and that through these the foreign sagas are then to be appropriated. When the elementary instruction in history of the public schools has made them familiar with the Nibelungen Tales, our boys in the higher classes, stimulated perhaps by the instruction in German, may choose for themselves the sagas of Ulysses and Achilles as reading.²

Finally, so far as concerns the material of profane history in the public school, it can scarcely admit of doubt after the preceding exposition that it must be gathered not from universal history, but first of all from the history of the German people. Foreign civilized nations are to receive attention only in so far as they have exercised an essential influence that the child can be made to understand on the development of our civilized life or of the history of the Gospel. But those historical facts are always to be made

¹ Compare the author's treatise on "The German Saga in Historical Instruction in the People's Schools." — Kehr's *Pädagogische Blätter*, 1876, pp. 202, ff.

² Against the treatment of Robinson Crusoe in the first course (perhaps in second grade) we may mention the fact that it is not a material for national culture, that it is too far removed from the outward and inward experience of the child in this grade, and therefore presumes decidedly too much on his activity of imagination and his moral conscience. We agree, therefore, entirely with the doubts expressed by Hartmann in this regard. — *Sächsische Schulzeitung*, 1887, p. 175.

prominent that testify to the gradual progress in intellectual and material life, those facts that stand in causal connection with the civil, religious, social and economical institutions and conditions of our time. In this way the history of the several states becomes the history of civilization; the past empties into the present with as full a stream as possible; the material of culture ever remains near to the national sphere of thought and so also near to the experience and interest of the child.

The arrangement of the subject-matter of the course will here in the main follow the historical principle likewise, although in details the other pedagogical principles may make modifications necessary. In this connection we can refer the reader to our remarks on instruction in biblical history.

In other fields of instruction, as in history it appears that the pupil's power of apperception is not dependent solely on the unchanging factors connected with his mental development, but that it can be essentially increased through appropriate choice and distribution of the subject-matter of instruction. How much easier and better would be the apperception, with how much greater success would be the learning, if the geographical matter were put in closer connection with the history; if natural philosophy illustrated the progress in human work, if drawing followed the development of the fine arts, if arithmetic drew its matter principally from subjects dealing with material things,— to demonstrate all this would be as interesting as it would be important. In these matters we have made only isolated beginnings, although they are full of promise. Much individual work is still to be done, and much credit is still to be gained. But we do not deceive ourselves, when we seek progress in methods preferably in that direction designated by the laws of propædeutics and of concentration. To select the material

for instruction, and then to bring these laws as far as possible into consonance with one another and with other principles, should be, in every subject, the most important problem of the student of methodology.

After the teacher has satisfied the demands to be made regarding the *object* of apperception, he has further to take care that all the helps to apperception that already exist in the mind of the scholar or that may easily be made effective, shall be turned to account. He must therefore turn his attention to the *subject* that apperceives; viz., the child.

2. PEDAGOGICAL DEMANDS WITH REFERENCE TO THE APPERCEIVING SUBJECT.

(Investigation, enlargement and utilization of the child's store of experience.)

In general, with reference to the apperceiving subject, the teacher must see to it that the *pupil holds in readiness numerous similar, strong and well arranged ideas for the new material that the instruction is to bring to the understanding.*

This presupposes, however, not only familiarity with child-nature in general, and its stages of development, but also in particular a thorough knowledge of the peculiar store of ideas possessed by the pupils of a particular school, and a deep insight into head and heart of one's own scholars. Both do not fall to the lot of the born educator; they must be laboriously acquired through long years of conscientious observation. For this purpose it is not enough to know the pupil merely in the few school hours in which only a portion of his ego manifests itself, and that not always the most important part, nor is it enough to undertake to judge him by his reports. It is necessary to hunt for his individual traits

on the play-ground, on walks and at celebrations, where he appears much more free and unconstrained among his play-fellows. It is necessary to cultivate active intercourse with the parents, and in general with the circle of people to whom the scholar belongs; not less necessary is it through pure, unselfish benevolence to keep the heart of the child open to us, if a deeper view into his soul is to be our portion. Extremely difficult it will of course always remain to see into and understand the child at the commencement of instruction, when as a stranger he comes to school for the first time. What does the teacher know of the great work of mental creation that has been going on in each and every child, and of all that he has lived through and experienced in six long years? It can not cause us wonder then, that there are still in the pedagogical world opposing views in vogue in regard to the number of apperceiving ideas, feelings and desires that the child gains before instruction begins. Some believe that in the case of the elementary pupil we must not presuppose anything, nor reckon on any, or at least many helps to apprehension derived from his experience. They think that instruction, at least at the very first, must commence quite at the beginning and create something entirely new; it must ever remain in irreconcilable contradiction to the life and doings of the child outside of the school. Opposed to this pessimistic view stands on the other extreme one that is quite too optimistic. Such views are held by all those who point to the acquired and innate abilities of the children and believe we cannot presuppose too much in them and who therefore, without asking about the store of apperceiving ideas existing in the child, with enviable carelessness and security strike out boldly to teach. If the teacher is ever called upon to choose his position in a conflict of opinions, and through original investigation to form

his own conviction, such is the case here. It appears to us that the investigation (difficult as it may be) of the mental products gained by the pupil before the school age, is especially necessary and requisite for all instruction that does not wish to build on a sandy foundation. Important reasons support this view. —

Jean Paul says of the child, that it learns more in the first three years of its life than an adult in his three years at the university; that a circumnavigator of the globe is indebted for more notions to his nurse than to all the peoples of the world with whom he has come in contact. It is, in fact, astounding what a relatively immense crowd of ideas a human being gains in the first years. He gets acquainted with the thousand things of home, street, garden, field, wood, the wonders of the heavens, the manifold events of nature, the land and people of the neighborhood, and learns to call most of them by name; he learns to use a great part of the vocabulary of his mother tongue, and its most important forms of word and sentence; he learns to think in the vernacular.

These numerous ideas belong at the same time to the most important that a human being ever acquires. They are the first and chief harvest of intellectual activity; the main trunk of the material of thought with which the whole after-life of the soul is connected. As they are the result of the intercourse of the human being with surrounding nature and the people of the neighborhood, so they serve in turn to facilitate and advance this intercourse; they are certain of an uncommonly frequent reproduction by reason of their simplicity and distinctness. They form, as it were, the capital in iron, the most indispensable minimum of stock in thought, without which a human being could not get along in the most limited surroundings, in the most restricted circle of experience, let

alone take part in the material and intellectual interests of his people. They are further the presupposition of all higher intellectual life, the bottom and foundation on which all true culture rests. And just because they have proceeded from sense perceptions, and mostly represent something tangible, mirroring things of the outer world, are they especially adapted to be "representative pictures of the distant and the past." They bring into vivid consciousness and distinctness of perception that which lies beyond our horizon in space and time. Just so the pupil, if he succeeds in becoming absorbed in the past and in distinctly picturing to himself historical persons and conditions, or in travelling in fancy in foreign lands, still after all is really wandering on his native soil and working with ideas and perceptions that he has gained about home. This has already been shown above. We have here merely to add that not only in geography and history, but in general in all instruction which requires illustration of what is distant and past by means of description and picturing, recourse must ever be had to ideas acquired by the boy outside of school. Out of these arise further, little by little, numerous psychical concepts; or at least such as have their root in these and receive from them their living content. For instance, it is a long time before the pupil can think of spring without at the same time involuntarily thinking of the green fields, the variegated meadows and blooming trees of his native place. If he has mentally to measure off an hour's journey or a mile, he will surely recur to two familiar points in the neighborhood of home, perhaps two villages or two hills. In this way the child keeps the acquired concepts alive; for as the tree must wither whose cells are not refilled with fresh sap every spring, so would also our abstract concepts die away and turn to empty shells, if we did not ever anew fill them

with material derived from living sense perceptions. In this way the perceptions acquired by the child in his youth help to master and secure the abstract ideas. This is shown by still another consideration. As is well known, all abstract ideas are denoted by words that originally applied only to concrete things, to activities and relations of the outer world. Of course this transference did not take place entirely arbitrarily, but words were mostly chosen that referred to a similarity or to certain relations between the concrete and the abstract idea. One that has the concrete idea in question vividly present, will necessarily unlock the abstract ideas more easily and fully. Accordingly, we may further assume that also in the case of the child, who brings with him so many concrete mental pictures to school, "the abstract ideas must gain much in meaning through the knowledge of the relation of the words in which they are expressed to the picture-words from which they are derived."¹ So, for instance, the idea of the process of plant growth observed innumerable times in nature in the most varied stages, could not exist in the soul without at the same time throwing a bright light on the conception of spiritual and moral growth. Or, what lively echo may those lines from the Edda arouse in the boy, who has become familiar with wood and field, with path and bridge, on his numerous forays into the surrounding country : —

" If you've won a friend that you can trust,
Then visit him not seldom,
For bushes green and grass grows high
On the road that no one treads."

Experience confirms this view. We see how a striking figure, a fitting comparison, often transmits understanding of a point to the mind like lightning, and lends to concepts

¹ Lazarus, *Das Leben der Seele* (third edition), II., pp. 195-196.

a distinctness that could not be reached without the help of concrete ideas. But if, as Lazarus says, clearness in thinking, all the way up into the highest regions of concepts, is dependent on the distinctness of the underlying sense-perceptions, then it becomes clear from this fact also, how incomparably important the concrete ideas acquired in early youth are for the intellectual life of man. They are to be set down at once as his strongest and his most lasting ideas. The child received them in a relatively restricted sphere of experience; again and again the same things presented themselves to his perception, and ever deeper did the same ideas imprint themselves upon his mind. With every repetition they increased in vividness and strength, and so he became little by little entirely familiar with the objects of his home and his neighborhood as with dear old friends. For, "that which gains a predominating influence on the way of thinking in the child, is not likely to be solitary, infrequent phenomena and actions, but the general character and continuity of similar observations which he has the opportunity of making on persons and things."¹ The adult has the greatest inclination and love for those fields of experience and spheres of activity in which he works with the greatest ease and success, in which he feels himself fully at home. Just so for the child; ideas of objects around home have a special charm, because they are associated with numerous feelings of pleasure and of successful activity. Whatever is known and familiar "accommodates itself easily to the flow of ideas and their connections," and gives the mental activity that certainty and regularity on which calmness and joyousness of spirit essentially depend. Therefore also, because the child is "at home" among them,

¹ Waitz, *Allgemeine Pädagogik*, third edition, edited by Willmann, page 201.

does he feel so well in the midst of the things about home. He recognizes in them his whole world of feeling; for it was already indicated above that the first six years of life furnish the foundation for the feelings also. The intimate intercourse of the child with father, mother, brothers and sisters easily gives rise to the feeling of love and to benevolence in its preliminary form directed toward particular persons only. The social intercourse with playmates and others of the same age gives rise to sympathy in sorrow and in joy, the feeling of justice and of fairness. The helplessness and need that make the child run continually to his parents, produce the feeling of dependence, of respect and reverence for authority. How the power of family life, the settled order and quiet habit of home is calculated to implant little by little the moral ideas and religious feelings in the heart of the child, has been shown in an especially warm and convincing manner by Pestalozzi in his book, "How Gertrude teaches her children." According to him the home is the soil in which alone virtue and religious feeling can thrive and develop. The relation of mother and child is the main source of moral and religious ideas. In this connection, however, the influence of surrounding nature cannot be left unnoticed, as is testified by the confessions of no less gifted persons. Let the reader recall that beautiful expression of our countryman, B. Golz, on the awakening of child-religion through the feelings connected with spring: "When the mild days of winter had gradually melted the snow, when the sparrow and the goldfinch chirruped on all the hedges and roofs in the joyousness of spring, then a mild breeze blew around me, and the sun looked out of the purest ethereal blue, as full of promise into every window and into every human eye, as if it wanted to say to the soul: "Now you have conquered, and I am your old sun again, and you

are my dear soul as ever'; then such a mild winter's day became to me a reminder of the old and the new covenant, and a child-religion budded into my childish heart with the anticipated feelings of spring, and opened all the leaves of the written Bible before my mind's eye, so that I afterwards had to recognize in the Christian doctrine and in my confirmation nothing but known teachings and sensations." ¹

These feelings then grew up before any instruction, and so they remain also the inseparable companion of the range of thoughts connected with home. Their contents are indissolubly connected. The things that surrounded a child or with which he was engaged, in the moment when joy or sorrow stirred his heart, became afterwards the witnesses to his deepest emotions. This explains in no small measure the peculiar charm of home, pictures and ideas, the strength and persistency with which they make themselves felt, often unconsciously, through the whole of life; and also the freshness and vivacity which adapt them in preference to all other ideas to the apprehension of the new and the strange. For it has been already explicitly shown above that the numerous, concrete, fresh and strong ideas gained in earliest youth are the best helps to apperception for all subsequent learning.

While above, however, we noted the richness and importance of the sphere of ideas and feelings which our little ones bring with them to school, we were still thoroughly conscious of their limits. It could not, therefore, be our object to substantiate the opinion of those who believe they can presuppose everything possible. Quite in a general way it was our wish to give a description of the mental stock that the child brings with him to school, a picture that needs modification and completion as often as juvenile individualities occur. For all pupils do not bring with them an

¹ *Buch der Kindheit*, page 103.

equal amount of mental treasure, nor do all bring the same. On the contrary, there often appears in the extent and content of children's ideas somewhat glaring differences. The pupil who has passed the morning of his youth in the circle of a happy, honorable, and pious family, who has had the sacred love of a true mother and the moral earnestness of a strict father to watch over him, will come to school with quite other moral and religious feelings and views than the poor child of the proletariat, who perhaps does not even know his father, or who has been daily witness to the most disgusting and ugly family scenes, who has spent the most part of his childhood on the street and has never known the blessing of quiet, happy domestic life. "Children who grow up among crippled factory hands, among consumptive weavers and in woodless places, — children who from birth have never seen sea or mountain, are all their lives lacking in the tones, accords and stories that make up the poetry of the world." ¹ For, besides the family life, there is also the character of the surrounding nature that conditions many a peculiarity of the child's thought and feeling. It is not a matter of indifference whether we passed our youth in a quiet, retired forest-village, or in a dark, damp dwelling in the turmoil of the metropolis. It is not the same whether we played before the door of a lonely hut on the heath, or whether mighty mountain giants looked in at us through the window early and late. The son of the mountains, who has never gotten out of the exclusiveness of his landscape, will find difficulty in forming an idea of a broad plain. He will ever be thinking of his valley widened out somewhat, even when he himself later uses the word. On the other hand, the boys from the Lüneburg Heath will remain a long time with a very cloudy idea of the Alps, just as our children

¹ Golz, *Buch der Kindheit*, p. 378.

from the Vogtland bring to school no notion of the ocean, or a very imperfect one. Different in many respects are the thoughts and feelings of the child from the metropolis and the child from the village or country town. Very different are the notions that they bring with them to the recitation. It cannot be denied that the metropolis offers many ideas to the pupil, that never fall to the lot of the peasant or small townsman in his whole life. They offer a many-sided stimulus. But the material of ideas and concepts is too immense¹ for the child to master it; it is too manifold and different in kind, so that the mental pictures too often interfere with one another. The objects of perception follow one another in such rapid change that the youthful mind has not enough time in many cases to comprehend them clearly and distinctly. The greatest disadvantage is, finally, that the child in the metropolis gains too few perceptions of the woods and fields, of the mountains, valleys and waters, and of the most important and simplest employments of man, — *i. e.*, such out-door notions as we became acquainted with above, as forming the foundation of our intellectual life. So it was found, for instance, in thirty-three people's schools in the Vogtland, in the examination of the newly entered six-years-old children in June of the year 1878,² that of 500 city

¹ See Bartholemai (*Jahrbuch des Vereins für wissenschaftliche Pädagogik*, V., pp. 290 ff.). Compare also *Sächsische Schulzeitung*, 1880, No. 35: "On the influence of the metropolis on the sphere of ideas of the child."

² The examination took place at the instance of the author, between Easter and Whitsuntide, 1878, in the Burger Schools in Plauen, and in twenty-one village schools of the Vogtland. The number of children questioned was over 800. Similar statistics were taken in 1880-1884, by Director Dr. Hartmann in Annaberg. From the interesting statements published we take the fact that the girls showed themselves on the average richer in ideas than the boys, but that all the Annaberg children were in command of relatively few useful ideas on their entrance into school.

children questioned, 82 per cent had no idea of "Sunrise" and 77 per cent none of "Sunset"; 37 per cent had never seen a grainfield, 49 per cent had never seen a pond, 80 per cent a lark, and 82 per cent an oak; 37 per cent had never been in the woods, 29 per cent never on a river bank, 52 per cent never on a mountain, 50 per cent never in ehureh, 57 per cent never in a village, and 81 per cent had not yet been in the castle of Plauen; 72 per cent could not tell how bread is made out of grain, and 49 per cent knew nothing yet of God. Similar conditions were shown in a factory village in the neighborhood of Reichenbach. In that place of 17 ehildren only two knew any river, and what these called a river was a shallow ditch; only two knew anything of God, and one of these thought of the clouds instead. Relatively much more favorable results were obtained in the examination in the other village schools. Of the 300 elementary scholars in these only 8 per cent had never seen a grainfield, 14 per cent had never seen a pond, 30 per cent a lark, and 43 per cent an oak; only 14 per cent had never been in the woods, 18 per cent on the bank of a creek or river, 26 per cent on a mountain, 51 per cent in a church (many children do not have a church in the place where they live); only 37 per cent could not tell how bread comes from grain, and 34 per cent knew nothing of God. We see from this that the child's store of knowledge, though relatively rich in external percepts, is subject to a certain one-sidedness that makes itself sensible as a want because the child's

It is noticable that the boys showed themselves superior to the girls in nearly all objects taken from the animal and mineral kingdoms as well as ideas relating to human life. On the other hand, the girls were more at home in fields requiring observation which were designated by the headings "Natural Events," "Division of Time," "Landscape," "Religious Idos." — Hartmann, *Die Analyse des Kündlichen Gedankenkreises*, etc., 1885, page 88-94.

knowledge frequently covers only a few fields. Indeed we are not afraid of falling into contradiction with our previous exposition, if we further maintain that even those important, strong and lasting notions that the child collects in his youth, still need in great part supplementing and clearing up. We called them strong and lasting ideas on account of the lively feelings associated with them and the numerous repetitions that they experienced. That does not in any way mean that the child every time comprehends the things he meets in all their essential characteristics. We have already seen how in early youth on account of the abundance of impressions pouring in on his senses, the child cannot help apperceiving in a one-sided way. It is not surprising, therefore, that he not unfrequently gets no more than quite superficial or even entirely incorrect notions, and that with reference to objects that he has daily opportunity of observing.

Two things follow from the above consideration: It is certain *that the child brings to school with him in the numerous, important and strong ideas, feelings and inclinations acquired in youth, at the same time the best and most vivid helps to apperception in the recitation. But the content and extent of these are nowhere entirely the same, and in many pupils often differ strikingly from one another.*

For these reasons we demanded above that the teacher should not begin the instruction of his six-year-old little ones at once, as if they were in command of all the helps to apperception in equal measure, and that he should not presuppose everything in them.¹ *We demanded that he explore*

¹“That painful habit of assuming unknown things to be found in children, bars all regular instruction, all orderly education, and implants a habit of thoughtless acceptance and thoughtless repetition of words of the meaning of which one does not think. This habit is a cancer disease in our schools.”—Jer. Gotthelf, *Leiden und Freuden eines Schulmeisters*, I., pages 158-159.

the existing store of thoughts in the children in order that he may learn to know the ground on which he is further to build, and the most important omissions in sense-perceptions that require filling out.

For this purpose statistical information is necessary, similar to that mentioned above, or like those investigations first started, we believe, by the pedagogical association in Berlin in the year 1869.¹

Of course, many difficulties stand in the way of taking such statistics of our six-year-old little ones at their entrance into school. If, for instance, the examination questions be directed to the class, then there is danger that many scholars will acknowledge views that they in reality do not entertain; many answer in the affirmative only because the others do, below whom they desire not to stand. If, therefore, the answers of the children are to serve as a foundation for statistical inferences of any kind at all, it is indispensable to examine the pupils in small groups (of two to five children). This can easily be arranged for at the intermissions or at the close of the recitations.

But even then when the children are questioned singly or in smaller groups, they very often make use of words with which they associate either no idea at all or a wrong one. It is advisable, therefore, besides the main question, to put still other side questions to the scholars in order to convince one's self by unconstrained conversation with them, that they have not merely repeated what others answered, or that they are not deceiving themselves. It is hard to induce some children, especially those in the country, to express them-

¹The association sent out question blanks to all the school principals of the capital, with the request that by means of definite questions and answers, they should determine the range of ideas of the Berlin children on entering the lowest class, in so far as it related to the neighborhood.

selves about what they have seen and heard. Their tongue can be loosened only by the kind manner of the teacher; for this purpose he will very often have to converse with them in their own peculiar way of talking in order to free them from their bashfulness.

We are not afraid that (as Niden claims in *Jahrbuch des V. f. w. Pädagogik*, XIV., p. 87) such investigations will determine the existence of only rudimentary and isolated ideas. For such questions will always be chosen, an affirmative answer to which will presuppose a definite group or chain of sense-perceptions. If, for instance, the child demonstrates beyond doubt that he has already been in the woods, on a mountain, or in a church; that he has seen a fish swim in the river or in the pond, then we are well justified in inferring the existence not only of isolated rudimentary ideas, but of entire groups of ideas. Or, on the other hand, if a child in Plauen has not yet been in our castle or on the bank of the Elster, then it is certain that he lacks many (if not all) of the separate ideas belonging to the whole idea of "castle" or "river." If, finally, the objection be made that the six-year-old child has perceived and experienced much more than he can designate in words; that, accordingly, our statistical data will never sufficiently cover the child's field of ideas, we answer that all percepts that are not fixed by words have as good as no value for the recitation; they are too indistinct and fleeting to be used there with success.

But where, in spite of all, such statistical investigations must be omitted, it ought to be ascertained, by long continued, careful observations, what instruction can presuppose in the child, and what necessary notions the newly entered pupils, as a rule, are lacking in. That can be accomplished without a great expenditure of time; there is

only need of the regular noting of such experiences as constantly press themselves one by one upon the teacher in every recitation. For instance, each primary teacher should, upon the presentation of new matter, — *i. e.*, at the stage of analysis, or preparation, — take thorough survey of what contributions the experiences of the children can make to the new topic. If the results of these inquiries are carefully recorded, there will gradually arise “an analysis of the contents of children’s minds,” which will satisfy all reasonable demands. For only when this has been done will the teacher be fully conscious of a further duty, that of calling up defective ideas, and of strengthening, supplementing and enriching them, together with others that may be present, thus enlarging, arranging, and deepening the pupil’s store of experiences.

In and about the home the child has acquired all the ideas he brings to school; here dwell the objects of his perceptions, here are found the beginnings of his notions and feelings. It is therefore self-evident that the instruction which is to elaborate and supplement this material, should start with the same sphere of experiences, or, in other words, deal with the surroundings of the child. Because we know that the child on entering school has fully mastered only a limited part of his surroundings, and that many of his home observations need clearing up and sifting, we lead him back into the old familiar world, in which he has heretofore lived, and which is dear to him. We teach him to know it better and to make him more familiar with it — we develop a knowledge of the home environment (*Heimatkunde*).

If we take this word contrary to common usage, in its broadest meaning, we of course do not deal here merely with a preparatory course for geography, for the home comprises more than the piece of earth where we were born

and brought up; it includes also the products of the soil, the plant and animal life, the inhabitants with their occupations and customs; so through careful observations of home objects and incidents, our instruction is to secure vivid sense-perceptions for more than one realm of knowledge.

Geography, history and natural science owe to it the most important elementary ideas; and similarly geometry, arithmetic, instruction in the mother-tongue and in drawing, relate to numerous inner and outer experiences of the child as they come to him in his intercourse with things and people at home. It does not aim to familiarize the child with all the knowledge that a thorough and detailed description of the home might afford, for how could he assimilate all this material so vast, so difficult of apprehension?

Not the entire home even to its smallest, most insignificant nooks would it present to the pupil, but only so many objects of the same as he may need in order to understand the instruction. It will consequently bring into the field of his observation the most important and most necessary objects of the environment. It will content itself with the production of observations most needed for the lesson: with typical perceptions which he uses most frequently as aids to apperception, and the objects of which are capable of awakening a strong, direct interest in the child. Accordingly Pestalozzi's "hole in the wall-paper" is just as much to be excluded from this home-knowledge as those empty, extremely prosaic things chosen from considerations of thoroughness for purposes of object teaching, such as boot-jacks, horse-shoes, slippers, night-tapers, coal-shovels, pitch-forks, and all similar objects smuggled in through the "normal words" of the reading and writing method, and in themselves unlikely to elicit the interest of the pupil.

We remind the reader of the following favorite objects

mentioned in most of our primers: ax, hook, wheel, paper-bag, saw, club, cane, etc.

This home-observation lesson, futhermore, should deal only with such things as belong to the personal experiences of the child, which he can really observe with his own eyes and ears; whatever things lie beyond the horizon of home — if ever so interesting — as for instance strange animals and plants, as long as they cannot be observed at home or explained through visible home-objects, are absolutely to be excluded. Likewise we should guard against a general discussion about the seasons, the garden, the meadows, water, etc. Prefatory reflections such as the following are often assigned to observation lessons: “description of spring, summer, autumn and winter in general,” “general review of the garden and garden work,” “description of the meadows and fields in general,” “the forest in general.” — Such general observations as do not emanate from a fullness of concrete single perceptions, stand on the same footing with those abstract and fruitless exercises in thinking and speaking with which formerly our youth were tormented. Consequently instead of taking a course that has to do neither with home nor with observation lessons and would improve the pupil in nothing, we should rather always start from a definite forest, mountain, pond, or river of the neighborhood, and always return to it, if thereby we can lift obscure and unsettled ideas into clearness. For not the general, but only the particular, the special, the individual, can be an object of this home-observation lesson.

From the school-room and the school-house, to which our little ones first pay attention, we lead them into the school garden, with whose kitchen plants, flowering shrubs and fruit trees they become familiar, whose inhabitants (bugs, bees, ants, snails, birds), they can watch in their life and work.

In field and meadow there is offered no less rich and interesting material for observation : the manifold labors of the farmer and the herder, and the most important products of the field in the different stages of their development. Over hill, mountain and valley we ramble through the woods, with whose trees, fruits and animals, together with their management, we become familiar under the friendly guidance of the forester. We go down to the nearest creek, river or pond in order to observe the aquatic animals as well as the fisher and trapper, who catch them; we follow the course of the water down to the mill, which we inspect minutely, and which furnishes an occasion to discuss the question how bread is prepared. We observe the native sky with its clouds and stars, we learn to take our bearings according to the points of the compass and to notice the changes of the day and the season; we observe the phenomena of the thunderstorm, count the colors of the rainbow, gaze with interest upon the flocks of birds of passage which pass through the sky in the spring and autumn. And as in the village we have become acquainted with the most important occupations of the farmer and the forester, the simplest human dwellings, the farmyard with its domestic animals, so in the city we visit, as convenient opportunity offers, the workshops of the mechanic, who will disclose to us the construction of the most necessary utensils and tools, the building lot of the mason and carpenter, the factories of the most important industries. We follow the principal streets, upon which moves the home traffic, and even where we find a remarkable building, perhaps an old castle, a palace, a church, a city hall, we tarry with special interest. This home instruction demands therefore a wandering through the home neighborhood in all directions; it requires of the child a continued observation of what is and what transpires

in its surroundings. This kind of instruction would completely miss its purpose if, instead of the objects themselves, it were perhaps to present merely pictures, such as are so popular in the pictorial lessons of our schools; or if it were to start from the lifeless card and try to show the child what it can learn only in and out of the home itself; or if it were to attempt to overcome the deficiencies of the child's perception through scattered descriptions borrowed from a text-book and through the mere word of the teacher.

It is certainly self-deception to ascribe to language the power "to transfer the observations of the speaker to the listener (to wit, the child) with the full force of the sense impression and to awaken in the listener the feelings of the speaker with like vividness." The liveliest representation by the teacher is never able to replace or render unnecessary the child's personal observations; he himself must see and hear, must observe with his senses the things the perception of which he is to share. And since in general things do not come to men, or to children either (because this in many cases is impossible or impracticable), therefore the school has to take the children to the things.

This is done if from the start there is a school-garden at the disposal of the pupils (at least those of the city), containing the most important plants cultivated at home, and the children are required to work in the garden during certain hours, and to attend to the beds assigned them and to watch the gradual development of the plants; or if regular excursions are arranged about the home or to the neighboring village or city. Each of these school excursions should have a definite aim and object, a specific purpose; the excursions should occur, not occasionally, "for a change and recreation on some of the free afternoons in summer,"—with such palliative remedy, such homœopathic pills, some seek to

satisfy the pedagogic conscience and to meet one of the most important didactic principles, — but as often as it becomes necessary to furnish thorough observations relating to some definite subject of instruction. We are aware that on account of the difficulties connected therewith, particularly in over-crowded schools, these excursions solely for purposes of instruction do not find general favor, and that men have sought to ridicule them as time-wasting “bumming,” as an “expensive and diverting innovation,” a “pedantic and sensational expedient.”¹

¹ It depends entirely upon *how* these excursions are arranged. We have already shown above, that the object is not to divert the children, but rather to instruct them; to each of them is assigned a definite plan, a definite task. We insist upon it, that this task shall be really accomplished by the pupils, that they do not observe superficially and inaccurately, but give an explicit account of their perceptions at the place of observation. There need be no talk therefore about “useless bumming,” and just as little about *pedantry and ennui*. On the contrary we know of no other lessons in which the pupils listen with greater pleasure and interest to the words of the teacher, or are more eagerly given to observation. These excursions place them once more into their wonted sphere, and there the teacher appears no longer as the strict master, but rather as a father who associates with them familiarly. In this way the children and the teacher learn to know and to love one another better.

This is an educational agency, which, at a time when there is so much tendency to regard intellectual culture as the chief object of the school, deserves to be emphasized all the more strongly. And what about the criticism that our excursions take too much time? As if the method which carries on home-knowledge within the four school walls, with mere empty words, did not waste still more time! This in truth wastes the entire time, for it builds on sand and does not yield clear-headed intellects, but shallow, pretentious braggarts. The hours devoted to our excursions are not at all lost, but inasmuch as upon the clearness of our perceptions depends clearness of thought even in most remote regions of abstract ideas, they will bear fruit a hundred fold. Moreover we are not of the opinion that these excursions are to be shifted to the leisure hours. It is but fair that the teacher be not oppressed with a new burden by this work, inasmuch as he finds in them additional labor rather than recreation. A definite time should therefore be allotted to them in the study plan, perhaps the last afternoon lesson, under some circum-

But the necessity of these excursions for all teaching that attempts to base the perceptions of the pupils on home impressions is not removed by the use of opprobrious terms. Besides, Bartholomäi has shown in an excellent treatise that school excursions in the manner just indicated are really possible and practicable even in large cities.¹

stauces even a whole afternoon, and they should be put on an equality with the ordinary work of teaching, even if it were only in order to meet any unjustifiable objections of the parents. As for the pretended expensiveness of our excursions, we freely admit to have had something in our mind quite different from most of our modern school rambling. We do not at all approve the fashionable mania, which unfortunately has to an extent also seized the minds of our children, which for a genuine excursion would require at least the crossing of the state line and a long ride in the cars. We hold the conviction, that generally there is too much riding and too little walking, that therefore a superficial knowledge and a certain depreciation of the home is likely to result. "Distance lends enchantment," etc.

Against such disloyalty towards the home the school must do its share of work, and for this reason we have not in mind expensive railroad trips and grand journeys, but simple foot-ramblings within the limits of home, which, in case the mother provides the little ones with some luncheon at home, can easily be arranged at an expense of a few pennies. In most cases the trips will, of course, not cause the least outlay.

¹ About excursions with reference to large cities (*Jahrbuch d. V. f. w. P.*, pp. 209-49). Our excursions will of course meet with great difficulties in large cities, in over-crowded schools, and also for the want of good sense on the part of some parents. There it is best to divide the school into sections for this purpose, not to mind the talk of the idle crowd, and finally to overcome through the devoted and faithful discharge of our duties, the prejudices of parents who do not understand the importance and necessity of our efforts. At least one capable teacher, Dr. Bartholomäi, succeeded in this way even in a city like Berlin in carrying out these school-excursions regularly. He, too, found idle starers, who cracked jokes at his expense, and he heard it now and then said by the Berlin philistines, "that the children's clothes and shoes were being ruined uselessly"; but he maintained his purpose. Now, what was carried out there under proportionately much less favorable conditions, can, I think, also be carried out at every other place. Let us, therefore, give a trial to these instructive walks, calculated to strengthen the body of the child and to make his home dear to him; do not let us begrudge

If, finally, in the upper grades a little journey were added annually that would extend the sphere of vision of the pupils beyond the nearest surroundings, sufficient opportunity would be offered to further the concrete ideas in which our pupils are so deficient.¹

For it is precisely to such indispensable external observations, which pupils commonly lack upon entering school (every part of the country, every place has some very striking and interesting peculiarities), that home knowledge has to direct its special attention. Thus, if our children have not yet seen the sun rise and know practically nothing of the moon and the stars, we let them in morning promenades and evening walks observe the native sky long enough to gain the desired information. If, as in the case of a village situated on a wide plateau, they have found no opportunity to form ideas about mountain, creek and river,

our little ones these pleasant excursions, which fill their minds with new ideas, and open heart and soul to the fatherly friend, who honestly shares with them trouble and hardships!

¹How in relation to this the home may prepare for and assist the school is shown by Sigismund's suggestive paper, *The Family as a School of Nature*, only we should guard against one error that may frequently be noticed in families and kindergartens. Many parents and educators go too far in the effort, praiseworthy in itself, of giving the child as many ideas as possible, preparing him for the exercise of his powers of appreciation in the work of the coming school. They overwhelm and divert him with a multitude of pictures, the subjects of which either go far beyond his understanding and experience or which can be observed in nature with much greater profit. By this his apperceptive attention is considerably lessened, because the perception produced by the picture leaves much fainter ideas than the observation of the things themselves. Instead of such shadow-like observations gained through pictures, that forestall the actual, sensuous experience of the child, and produce a hollow make-believe intelligence without interest and intent, it is preferable to have none. Then at least nothing is spoiled. "For what I have not yet learned to know at all, I learn easier than what I have previously begun to learn in the wrong way."—Roch, *Gymnasialpädagogik*, p. 129.

we direct our first travels towards these objects. If city children bring with them very insufficient ideas of large standing waters, then the school-trip aims to reach a neighboring lake or large pond; if factory children, in most cases unnecessarily deficient in observations of field and forest, come to school, then the latter should first (and oftener than the city) be considered as an objective point of the excursions. — But not merely the lacking observations, but also the numerous observations which the child brings to school, have to be considered in the lessons on home knowledge. For many of their observations are positively wrong, many of them so superficial and imperfect that they urgently need to be repeated, strengthened, corrected and supplemented. It is needful to fix the attention of the child, so likely to touch only the surface of things, upon definite objects of perception, to lead him from his crude ideas of things as wholes to ideas of the parts of these things, to make these clear in themselves, and in an orderly synthesis enable him again to reach a distinct whole; that is, to form genuine, clear sense-perceptions. It is needful, in drawing and coloring, in simple pictorial representations of the observed thing and in its correct naming, to enhance the clearness of the involved ideas. It is needful to put into the varied multiplicity of the acquired observations a certain order, which of course in no way approaches a scientific arrangement. The reply to the important question in what succession to deal with the objects of observation, will essentially depend on the place of home-knowledge in the school, as an independent subject of instruction or as an adjunct of some other subject. Against the independent lessons as demanded by Karl Richter, Juetting and others, and commonly followed in the school practice of to-day, there are weighty objections. All its ingenious grouping of ideas is inadequate to

hide the arbitrariness with which it proceeds in their selection. Convincing reasons for the proposed succession of objects are mostly wanting—a sign that here the theory does not rest on a sure scientific basis. The lack of an orderly selection of home-material in accordance with universally admitted principles weighs, indeed, heavily upon the teacher. Consequently the children, too, usually do not know why just this or that object is taken up in the lessons; the thread is missing that should unite all the various home observations, thus insuring cohesion, permanence and interest. Indeed, the teacher is easily misled, through the feeling of this want, to anticipate their logical connection and arrangement into abstract notions and systems and to strive for a completeness in single groups of observation, for which the child at the time feels neither the need nor the interest. We transgress also against the law of apperception, in offering subject-matter to the child with which he is in part so fully conversant that he finds it difficult to interest himself in it independently. To offer for observation and in the same form during many successive lessons things with which the child is perfectly familiar produces languor. The things of the nearest surroundings awaken the childish interest only if they are used in relation to other subject-matter, and thus viewed in the light of another sphere of thought. Finally this independent object-teaching heaps up, in the first two or three school years that are usually assigned to it, a number of ideas without being able to insure their immediate or speedy use. It keeps a cargo of observations valuable enough in themselves in store; these undoubtedly obstruct one another and must steadily lose in mobility for purposes of apperception, *i. e.*, the power of energetically uniting themselves with other ideas. The health of the intellectual life suffers if we give several years to the

task of gathering ideas tending to apperception and postpone to later years the exercise of their apperceptive tendencies. This is contrary to the child's wonted practice of restlessly working with his limited intellectual capital. The saying "In rest, I rust" applies also to ideas stored exclusively for future use. Besides it is well to consider that great apperceptive mobility exists only in ideas that are linked with our personal interests by vivid feelings and inclinations.

It does not suffice that we have seen an object and viewed it closely; we should also in our experience and in intimate intercourse thoroughly assimilate whatever is to unfold within us into strong activity.

The dear places of home where we liked best to play, the animals and the people with which we held special intercourse, the roads upon which we could accompany our father through the woods or fields, the grass-plot or the woodland meadow where we celebrated our splendid juvenile festivals, — these always present themselves first as the strongest and ever present aids to apperception. If, now, the practice of independent object-teaching attempts in the first two or three school years to accumulate beforehand and to lift into clearness nearly all those important ideas which in a succeeding stage of instruction are to serve as aids to apperception, may we then presume that the six to eight-year-old child has learned by continued intercourse to know familiarly and to love all the various objects to be discussed subsequently? Is it really conceivable that the eight-year-old child should have closed the round of his home experiences and now have to meet nothing essentially new? This is denied by the fact that the boy, from the time when he can risk and plan independent excursions, starts out all the more upon new discoveries; that his home, the farther

he explores it, presents to him ever more new and attractive experiences. Moreover, it is impossible, in the first three school years, to exhaust the sphere of home observations, and much of it at so early a period lies beyond the child's understanding, as, for instance, the significance of modern means of communication, of industry, and of certain institutions of state and church. Here then we have to await the favorable opportunity when, as instruction progresses, the understanding for such things can be rendered easy. If accordingly the child becomes interested in home objects and is attracted by them *only very gradually*, and no farther than he enters into relations of personal interest with them; if for the formation of these intimate relations a few years do not suffice, but the whole period of youth is required, do not then many of the ideas, awakened by the independent observation lessons during the first school-years, seem like empty nuts devoid of life and germinating force? Do they not confine the child, lesson upon lesson, to natural objects that can mean nothing at all to his mind, because he has had no experience with them? Do not children in this way collect stores that are wanting beforehand in apperceptual mobility? All these evils can be avoided, if, in accord with Ziller's plan, the establishment and extension of the sphere of home experience is not assigned to a special subject, but to all subjects of instruction, especially to history, literature and science. By these subjects it must be determined, from time to time, what things are to be closely examined. Not systematically and in the same way common to travelers' guide books is the home to be gone through with and described, but ever as the needs of instruction may demand it we turn to the home environment. Where, for instance, it is desirable to bring historic distances within the grasp of the child's mind, or to present to his view strange customs and institutions, then

we see to it that the pupil may find the needed representative images and perceptions through careful observation in and about the home.

For fairy tales and legends, for sacred and profane history, for geography and natural science, for arithmetic and form study, we seek as occasion requires typical objects and conditions for purposes of instruction. In this way the study of the home surroundings will from the beginning and in every grade receive in regard to its subject-matter definite direction from the material and formal subjects of the curriculum.

This limitation of the material of home-knowledge releases the "thoughtful teacher from the sense of oppression that always attends the feeling of entire indefiniteness as regards teaching matter";¹ for he knows why he handles just this or that subject, and from which point of view it is to be regarded for the purpose in hand. While, further, the analytic material of home-knowledge enters into closest communication with the subject-matter of the synthetically progressing branches of instruction, especially with the living scenes of history," the objects about home receive a peculiar illustration, a particular interest. In the light of history, of geographical description, or of the contemplation of strange, interesting scenes, products and occurrences, home appears to the child dearer and more significant as it becomes to him more intelligible and familiar. Finally, the fact that the material of home-knowledge is not crowded together into two years, but distributed over many years among the various subjects of instruction, affords still further important advantages. The teacher is not so apt to fall into the fatal error of assuming that by two or three years of instruction in home-knowledge he has in every direction supplied the

¹ Rein, Pickel and Scheller, *Erstes Schuljahr*, 3. Aufl. S. 100.

needed aids to apperception and that he may now be released from the obligation of attending to close and accurate direct observations. On the other hand, the pupil is not misled, as a result, to hurry through the home surroundings within the narrow school room, but frequent excursions and his own observations help him in the course of his entire youth to obtain a picture of home, which a forced instruction in two short school years would have endeavored in vain to produce. Since this instruction does not seek to reap the entire harvest at once, but gives the pupil time to enter gradually into close relationship with the objects of his neighborhood, it affords him from year to year more enlarged views, invested with a lively interest and capable of speedy assimilation with related ideas. Furthermore, if home experiences are not stored for years in advance, but always only at the time and in the place where needed in the course of instruction, and where they at once can have the strongest effect, then there is insured to them the power of apperception, the right connection with other spheres of thought. In short the analytical observation lessons connected with the various subjects of instruction of succeeding school years is best able to lead to the various provinces of knowledge those fresh springs of apperceiving ideas as they arise from the home experience of every one.

However, we do not conceal from ourselves the many difficulties that at present beset its establishment in our schools. We shall not place additional stress here on the difficulties, presented in the first edition of this work, whether and how it is possible to obtain the lacking aids to apperception in school excursions at the very time when they are needed for purposes of instruction, in factory towns where the teacher cannot dispose of the leisure time of his pupils as he chooses, in a mountainous district in the

winter time, where roads and paths are snowed under and many objects of observation are inaccessible, or in cases where unforeseen natural occurrences like continual rains have set in. For it is a matter of course that in the warmer season, when a favorable opportunity presents itself, many an observation should be taken in advance and in its full details, although it may not find application in the studies for several weeks or months; but such exceptions do not change the rule.

Of more weight, however, is the other fact, that this incidental home-knowledge is not reconcilable with every form of the course of studies. Its successful conduct presupposes at least for each school year a unified historical body of knowledge into which the home-knowledge can readily enter; also a patient tarrying with it, not a hasty running through with fragmentary patches of material. Dry guide-like reviews of universal history or detached Bible-stories, selected with a view to presenting subjects in concentric circles, do not answer the purpose. So long as preference is given to these, so long as a unified course of study derived strictly from the object of education does not make itself more strongly felt, and widely differing opinions concerning the content and sequence of the matter selected prevail even among the friends of this method, Ziller's proposition cannot gain general adoption. But that it implies an important step in advance, that the future belongs to it, is our conviction derived from a varied practical experience.

In this we are finally confirmed also by historical considerations. It is well known that the time lies not so very far back when the public school engaged in special abstract exercises in thinking and speaking, thus wearying the children and giving joy to none. This was based on

the wholly correct view, that knowledge without understanding can be of no use, that the pupil has intellectually appropriated only that of which he can freely dispose in speech and writing. To think and to speak are conditions and fruits of an educational intellectual culture. The error lay in the assumption that these exercises had to be confined to special lessons. Thus that was isolated which should be the object of every lesson, of each branch of study in its special province. The subject of home-knowledge is apparently in a similar condition. It is generally recognized that our thinking even in the highest abstract regions depends on sense-perception, and that without this firm foundation the results of instruction are quite doubtful and transient. And yet from this it does not follow that one should teach by itself, in a special course, what can not be left to a particular subject in later instruction. That would be like arguing as follows : Since thinking and speaking are among the most important activities of the pupil, therefore there should be special lessons in thinking and speaking. Possibly, it will here too, soon be generally admitted, that separate observation exercises unconnected with the principal school studies of the public school are just as superfluous as those thinking and speaking exercises. Perhaps it will then be conceded that to start from the home observations is not the task of one but of most branches, and that here a principle is involved, which must be heeded not only in one or two, but in every school year.

Consequently, then, home-knowledge is not a study corresponding to a definite department of instruction. But inasmuch as it treats of material home-observation, it serves as an analytic step in nearly all branches of study, and constitutes through all the school years an essential component of them. How much in particular the realistic branches need

these continual references to home experience, how only through fresh ideas derived from home-impressions, the difficult provinces of history and geography, for instance, can be mastered, cannot be emphasized too often or too urgently. We have already seen, what peculiar demands these branches make upon the intellectual activity of the pupil. In geography he is mentally to hasten through thousands of miles with lightning speed, and at the enumeration of great numbers of square and linear miles is to form a fair idea of the world and to associate sense impression with his words. Under the guidance of the teacher he is to travel in strange countries and to present to himself a vivid living picture of strange cities and men, he is to raise in his imagination the snowcapped mountains of the Old and of the New World, and to let his vision sweep over boundless expanses of giant streams and oceans. He is to feel the oppressive solitude of the desert and of the primeval forest as if he were a traveller; and stretches of country which it took years to explore, he is to survey and describe in a twinkling as he would an open book or a level field. But this is only possible if the pupil can draw upon the store of his own experience; he can comprehend the words of the teacher only in so far as he succeeds in forming similar familiar ideas. These constitute the elementary materials out of which the extensive edifice of geographical knowledge can alone be composed, the foundations and main supports upon which this mass of related ideas can rest securely. Where those aids to apperception are wanting, and the new finds no echo in the mind of the scholar, he is unable to follow the clearest and most vivid discourse, since he only hears words, nothing but words. A child that has not yet obtained an idea of a kilometer, a mile, a hectare, of a plateau or a valley, that has not at some time marked out

and sketched a plan of his home neighborhood, where he can readily find his way, that is wanting in the simplest of rudimentary ideas for geographical study, cannot have much of an idea of a square mile, of a plateau of terraced lands, nor show a real understanding of maps, and even the most perfect geographical study imparts to him nothing but indefinite, shadow-like ideas, and numerous unintelligible names. The same applies to history. If it attempts to bring before the pupil the civilization of the most important nations, if it tells him of the most varied governments and religious systems, or travels with him to the historic monuments of his native country and describes to him the splendor of the chivalry of the middle ages, the important inventions, the great wars of modern times, it can hope to create a deep enduring impression on the pupil's mind only in so far as its words result in the vivid reproduction of older similar ideas. We demand the impossible when we expect from a pupil who has grown up in a secluded place remote from public life and who, therefore, knows little of the most important state regulations, of the most prominent church and state authorities, of laws and taxes, of stations and ranks, of the manner in which the power of government in the modern state is divided, that he should transfer himself into the political life of the Spartans and Athenians and to understand the legislation of a Lycurgus and a Solon.

We preach to deaf ears when we speak of Olympic games or mediæval tournaments before the pupils have had an opportunity at public festivals at home, to obtain aids to apperception (however immature) for the new historic material. Indeed, even historic material that relates to times and events comparatively close at hand, as for instance, the story of the origin of the German cities, and German citizenship, of the

heroic deeds of our knights, presupposes greater preparation in personal observations than is usually demanded: for what would be the most brilliant and popular discourse to a pupil who does not know from his own observation the various vocations of the people, who has never stood before the decaying outer wall of an old town, and who has never visited and closely inspected the ivy-clad ruins and quaint castles of his home? We are too apt to underrate the demands upon the mental capacity of the pupil made by the historical and geographical studies; we presuppose in him a great store of experiences, an abundance of sense perceptions and ethical observations, of fundamental ideas of time and space, which he has either not at all or else not with the desirable clearness. No wonder that it is just here that the results of the studies are not in any way commensurate with the trouble and time spent upon them, and that after leaving school the influence of the school is dissipated nowhere more speedily than in these two provinces of knowledge. Geographical and historical instruction that does not seek its best help in the home observation of the child plays on a piano without strings. For only in and about home can be obtained most easily and surely those perceptions, external observations and elementary notions, the reproduction of which gives to the words of the teacher a living content and to the mere symbol the corresponding thing, and which alone secures apperception in any study.

Now as it is impossible to establish all these aids to apperception in the object-teaching of the first school years, much less effectively to store them for future use, we recommend the extension of instruction in home-knowledge to all the school years. In accordance with the opportunities in the synthetic progress of the school studies, the teacher should see to it that the pupil may obtain upon the founda-

tion of numerous observations at home, those indispensable geographical ideas of creek, river, tributary, source and mouth, island, peninsula and isthmus, plateau and valley, watershed, mountain crest and pass, etc. He should exercise him diligently in measuring and calculating stretches of road and areas. Thus he will form in his local home-experience clear and distinct ideas of geographical measurements. These measurements should be closely related to the daily observations of the child; the extent of an acre, a mile or a square mile, he should at all times be able to relate to a neighboring piece of ground or meadow, a certain section of the road, the division lines of his home district. He is also to become acquainted with the different soils of the home district, also with its swampy, sandy and barren tracts, so that he may have at hand definite appropriate images for the marshes, deserts and plains of geography lessons. He should group and compare what he has by degrees observed concerning the changes of temperature, the position of the sun during the different seasons, the gains and losses of day and night, the apparent changes of the moon, and should sketch a map of the celestial bodies with which he has become familiar. Finally this study will train the pupil, and this is not the least of its task, to draw an outline map not only of his residence town, but also of the entire home district, as far as it is familiar to him, and so to live into an understanding of the map.

In a similar manner historical instruction should seek to gain the most necessary observations and concepts. The public buildings or native town or neighboring city, the official proclamations of the authorities, the public elections, all offer occasion to instruct the child about the most important local and state authorities, about the functions and duties of the court and civil officers, about the leaders of

the churches and schools. In the forest and on the prairie can easily be gained a picture of the primeval conditions of the native soil — at a time when no man's foot crossed the woods; while on the other hand perhaps legends and chronicles of the foundation of the native place afford an insight into the conditions under which as a rule the settlements of our ancestors came about, and to show in what manner out of the obscurity of the forest there rose by degrees, single farms or entire villages. The giant graves and heathen places of sacrifice, to which the children flock with their teacher, the numerous legends of river-nymphs and water-sprites, of otter-kings, dwarfs and other mountain-spirits, the superstitious native customs (Walpurgis-fire, Christmas and New-Year superstitions) of which our children can give many vivid accounts, are sufficient to transfer them into the old heathen time, when our ancestors served Wodan or Swantevit, with the same reality with which a lone forest chapel, or an old decaying church ruin brings before the mind the centuries of a Bonifacius, or an Adalbert of Prague. The old castles and palaces of home which we visit frequently and inspect closely, give the pupil a clear idea of the dwellings and also in part of the occupations of the mediæval nobility, while the extensive lands of the neighboring manor-house, beside which even now the scattered properties of the other villagers almost disappear, afford inferences as to the social and economical conditions of the peasants under the feudal system, and the relation between the lord of the castle and his serfs. Impressive and eloquent stories are told by the old walls of the native city with its loop-holes, battlements and gates, an old tower, a decaying monastery of past times; in vivid directness they lead the child back to the times of his mediæval ancestors. Thus he gains in such observations at home a foundation for the de-

scriptions of German city life, upon which he finds a ready and secure foot-hold for apperception. Finally we render the pupil familiar with the origin and significance of certain popular festivals of home, search after the traces of great wars, which, unfortunately, may be found in almost every district of our fatherland, old Swedish trenches, a desert from the time of the Thirty Years' War, or Seven Years' War, a French cross on the public road, a monument in the centre of a field or in the church, a memorial tablet or a "peace-oak" of more modern origin: thus there will not be wanting material for analytic study relating even to most recent history.

Of course the sources are not alike copious in all parts of the country, and local conditions limit the teacher in many ways, especially in country schools. But certainly no locality is so poor in historic evidences, no home so entirely new that it does not offer something for the contemplation and inspection of the child, from which the study of history may start.

But while we thus extend the historical and geographical sphere of experiences of the children, inducing them to account for a number of facts, occurrences and objects of home, while we lead them again and again to the field of the dearest experiences of their youth, so that they may obtain clear apperceiving ideas for their studies, we still insist that the observations of home-knowledge should not be left off at all, that they should continue to the last school year of the pupil. In the home the child's powers are deeply rooted, here arise the springs of our clearest perceptions and deepest feelings. Therefore, we should not merely through two or three short school years foster and preserve these springs in the child, but as long as he sits at our feet may the sun at home shine into the nar-

row schoolroom and make learning a joy and one of the most cheering reminiscences of youth.

Like the home ideas, so too can all other experiences of the pupil, all that in other ways has grown strong and vigorous within him, serve as apperception aids in the studies. Here belong particularly the ideas and thoughts stimulated by instruction in previous grades, in so far as the material was chosen according to right rules and transformed into mental power. To know and to investigate these just as accurately as the spheres of the pupil's home experience is an indispensable duty of the teacher. When all instruction from the beginning is exclusively in his hands he familiarizes himself in the school work itself with the child's whole store of knowledge. Difficulties arise, however, in institutions; the work of instruction is apportioned among a number of teachers. Here it is desirable — also for other pedagogic reasons — not to change teachers every year with the advancing grades, but to entrust the children to the same teacher as long as feasible, and to limit the system of department teaching as much as possible in favor of grade teaching. But where this is not possible, the teacher should at least be put in a position through a course of study carefully laid out in every particular, through a conscientiously kept record of the results obtained during the course, and also through a lively pedagogic intercourse among the various co-laborers, to form a clear idea of the store of his pupils' ideas assimilated in the previous instruction. He must diligently inquire after what they have already learned in a certain direction, and how they have learned it, so that he may not suppose the unknown to be familiar or serve up the familiar as something quite new. Do not chide us for demanding too much in this respect from the teacher. If in ordinary life a housekeeper should never examine the condition of his house-

hold goods, but lay in new stores without regard to those on hand, his management could not be of long continuance. For like reasons the law menaces with severe penalty the merchant who does not make an inventory of his stock. Should that which is thus inadmissible in the material world be permitted in the spiritual? Certainly still less. And so the common demand is made of the teacher not to let anything essential be lost of the stores already gathered in study by the pupil, but to make good use of it as a welcome aid to apperception, and to connect with it, as well as with the home sphere of experiences, all that is new.

When our Saviour desired duly to impress his listeners with a religious truth he frequently chose a parable, an example, a story, in which quite common, well-known facts served to explain a new religious thought. The divine thoughts are presented by the Lord in a dress that corresponds with the country, the customs and usages, the daily labors and vocations of his people; he descends into the realm of thought and feelings of his countrymen in order to transform them from within, and to prepare their minds for the reception of his words. The land, the seed, the sower, the harvest, lilies and weeds, thorns and thistles, the shepherd and the flock, the vineyard and the vine, the fisher and the net, the merchant, he who seeks costly pearls, the publican — all these men and things of common life, old and familiar, become the vessel in which Jesus offers the new, his gospel of the kingdom of God. The simplest, best known incidents and conditions of life he takes up, for the purpose of teaching by them the spiritual truths of the heavenly kingdom, as if to entwine them in one another. Wholly after the manner his own sayings: — “Every scribe which is instructed unto the Kingdom of Heaven is like unto a man that is an householder, which bringeth forth out of his

treasure things new and old" (Matt. 13: 52). "Ye have heard that it was said by them of old time; but I say unto you," — so he leads from the ethical views of his time over to purer, higher principles. "The heavenly kingdom is like," — thus the words fall, time and again, from his lips.

He holds before the people a mirror of life where each can see and learn to judge for himself. Like an artist, he presents forms before the mental eye, all of which have a deep significance and are symbols of a great truth. Here he depicts God as a father who gives a commission to his son, or hastens with open arms to the one lost and found again, while he reproves the envy of the self-righteous brother; or he is a father who gives good gifts to his children; who feeds the birds of heaven, and sympathizes with his rational creatures. Here, God is a King who is about to reckon with his servants; there, a rich lord who prepares a supper; now, a householder, who confers with the gardener concerning an unfruitful tree; then, a proprietor, who employs people for his vineyard; or, a vintner, who fosters and prunes his vines. At one time the Kingdom of Heaven is a pearl, a treasure in the field; then a marriage feast, a fish-net, a wheat-field. Pardoning love, strict justice, the friendly invitation to all, the righteousness and long suffering of God, the high worth of the imperishable treasure, the necessity of bringing to God a pure heart, the mingling of the noble and ignoble in this world, and the last irrevocable separation — these are all impressed in the deepest and most lasting manner. This is instruction by observation. We are told that Soerates taught in like manner. Into the midst of the turmoil of the market and the streets, into the workshops of the artisans he went, teaching and questioning his pupils who thirsted for knowledge (for which reason his contemporaries reproached him with speaking always

only of smiths, cobblers and tanners). To the simplest and most concrete things, to the most personal events experienced by his young friend, he joined the weightiest philosophical inquiries. This is a hint as to the way in which we can make use of the above stated principles. We can secure to the child a rich supply of living apperception helps if we not only refer to the home all that is strange and remote, but especially make the unknown plain through the known, and join all instruction in the strictest manner to the personal experiences of the pupil.

This holds good for all branches of instruction, and for even the driest subject. How far, for example, Goethe's ballad of the Erlking, that story from the pagan antiquity of our people, seems to lie from the comprehension of the child; and yet, apperceiving ideas for this poem can be easily awakened. We have only to converse with the child about the popular beliefs in river and water spirits to make him tell of the old stories, so current with children, of the water-maiden who bleaches her washing on the banks of the stream, where the merman is who demands his yearly offering; or of the Loreley, ensnaring the boatman by her song; to remind him, further, of certain illusions of the senses, which he himself has experienced, when, in the darkness of night, he mistook strips of clouds for ghosts, and forest trees for dreadful monsters. All then becomes clear. However unknown and strange the new idiom, say the Latin, appears to the boy, many starting-points even for this difficult demand can be found in his personal experience. He already possesses the Latin for numerous known names and terms without previously having been aware of it: for example, Augustus, Sylvester, Felix, Clara, Alma, album, sexta, quinta, September, plus, minus, docteur, professor, director, etc., which series may be greatly extended.

These foreign names being carried over into the mother-tongue, this analytical Latin leads in the best way into the vocabulary and etymology of the foreign language. If then, later, he refers other English words, as altar, culture, fever, regal, rival, to their original Latin form, he thus conquers, as it were, a new world from his home foundation, and the entrance into this new world must become much easier. We shall not, however, as Ziller wished to do, work out this analytical language material independently in advance. Would not that be to fall into the mistake of the current home-science teaching, which in advance stores up for instruction the analytical material of experience, and thus "serves the spice by itself instead of with the food"? It seems much better to approach first the known forms of a foreign language, as starting and connecting points for similar forms. Geographical and historical instruction, as already mentioned, will, for explanation and interpretation, likewise make use of those ideas and concepts which were acquired in the home. By this means the child ascends in imagination to the highest Alpine summit, as he multiplies the size of his home mountains, placing one on top of the other. The ponds known to him he extends to great lakes and seas, and, with the concepts of his native winter landscape, he journeys into the icy region of the North Pole. With the church tower of his own place he measures the pyramids of distant Egypt and the lofty cathedrals of Christendom. About three times as high as the tower of our principal church are the great Pyramids; somewhat higher still is the Strasburg Cathedral, St. Peter's Church at Rome, and the cathedral of Cologne. Or, suppose the children are to learn in history of the battle in the narrow pass of Thermopylae. Then let us lead our little ones in mind to a certain place in the Elster Valley, well known to

them from their school excursions, where the way is suddenly closed up, being contracted on one side by high, steep walls of rock, on the other by the water, which seems to spread out before us to the horizon. And now we say to them: Thus must you form an idea of the pass of the warm springs; there behind a wall stood the hero band of Spartans, here in the wide plain lay the barbarian army, and from the mountain the traitor descended with the enemy into the valley. And as we depict the battle of annihilation, and those roaring sounds echoed by the walls of rock; as we relate the immortal deeds of the Lacedæmonians perhaps our pupils may be pleased meanwhile to linger here with their thoughts and to transfer to this place the din of battle; we will not disturb them in this if they only follow our words understandingly. Or when the child in sacred history, stimulated through the practical hint of the teacher with reference to his own home circle of observation, paints the biblical paradise in thought with the fresh colors of his own garden or of one otherwise well known to him; when he transfers the Jordan with its holy place into his known river valley; when he conveys the Bethlehem shepherds on Christmas night to the domestic plains, and, involuntarily, during the narration of the teacher, glances up to the neighboring hill as the mountain of the giving of the law, — we shall find nothing objectionable in such *naïve*, subjective comprehension, but will rather rejoice in it. For the child brings then to the new ideas offered by instruction such strong, living, helping notions as cannot be awakened more strongly and permanently even by the most perfect representation of the biblical places; he apperceives in reality what to another remains perhaps only empty words or shadowy ideas. But the other experiences of the child also present numerous apperception helps. Suppose, for ex-

ample, the distance of the sun from the earth is to be made plain to him. The teacher in the spirit of our method asks, "If now, up there in the sun one should shoot a cannon ball straight at you, what would you do?" "Jump aside," will be the answer. "But that is entirely unnecessary: you can lie peacefully asleep in your room, and get up again, you can be confirmed, learn a business, and become as old as I am — then here comes the cannon ball. Now spring aside! Behold, so great is the distance from the sun to us." How easy for the exotics among our flowers and trees to transport us into remote lands, which are their home! A tree-shaped aloe trained in the windows of many a farmer's room, or a pelargonium, serves beautifully as a starting point for soaring over the Mediterranean Sea into the sand wastes of Africa and the desert plateaus of the cape. The principal divisions of the earth have among us agents and consuls in every village common and in every garden. South America sent fuchsias, maize, and, above all, potatoes; Mexico, the dahlia and various cacti. And if the child comes to know, further, that in Persia the walnut, the peach, the horse-chestnut is at home; that the cherry and the hyacinth grow wild in Asia Minor; the white lily in the Promised Land; that the grape-vine comes from the Caucasus; the cucumber and kidney-bean from the hot East Indies; then these foreign lands remain to him no longer mere empty names or geographical terms, but he wins from them living, fresh-colored pictures.

When we at last pass over to the province of ethical and religious ideas, the assertion is not surprising that right here the demand upon the educator is especially difficult. Join all instruction as much as possible to the experience of the pupil. What the child brings to school with him of real knowledge of nature and of linguistic readiness, can be

gradually discovered ; but how will the teacher obtain definite knowledge of the experiences relating to manners and customs, the moral and religious feelings of the pupil? The heart of the child is in this respect almost inscrutable. And yet, as in every other province, so also in this, an understanding cannot be attained without help of apperceiving ideas. Many a biography of noted men attests that the words of the teacher, in the hour for religious instruction, often went over the heads of the children, since they found in themselves no echo to the learned, abstract form ; but that the inattentive class at once gave attention and were all eyes and ears if an anecdote, a story, an example from every-day life and childish experience, interrupted like an oasis the desert of abstract instruction. The domestic experiences of the child, his intercourse with parents, brothers and sisters, and playmates, his spiritual relation to God,—these are the ideas from which the teacher must principally derive the starting points, or aids to apperception. There occurs, for example, in a Bible story the word “gentle,” and he finds that all do not yet connect with this word a clear idea. Shall he now give a comprehensive definition? No ; only from his own experience will it become clear to the pupil what “gentle” is, as must all else which is to be in reality his own spiritual possession. The teacher reminds the pupil of a night when he suffered with a bad toothache and his mother took him at last on her lap, and, rocking and caressing him, comforted him thus : “Now it will be better. In the morning it will be all over.” This is a moment when the child forgets the school, but he never forgets the moment. Or, if the teacher endeavors to awaken the idea of sympathy, he will accomplish this in the surest manner when he reminds the pupils of experiences of their own and brings before their minds vividly those occasions

in which they rejoiced with the happy and wept with the weeping. The more richly the domestic instruction is imbued with such ethical experiences; the more carefully the rise of religious feelings and the observation of manners is promoted; the more deeply the event has stirred the soul, the better is the understanding that the child brings to the so-called moral instruction. — Indeed not all children enjoy so excellent an education, and only too often the experiences are lacking on which this instruction must base its developing activity. What must be done then? In this case it would be the worst and most preposterous thing for the teacher to attempt to supply the lacking ideas and feelings through edifying lectures, well meant admonitions and urgent advice. For virtue and religion must first be lived before they can be taught and learned. Moral, religious, and æsthetic ideas cannot be communicated through language and made intelligible, unless their personal content, the moral and æsthetic feelings, arise in the child himself. As little as one can make clear to a blind person by means of words, what a perception of a thing by light and color really implies, just so little can one show or explain to one who is absolutely without the inner stirring of the moral feelings what such a feeling is. The power of instruction to awaken moral and religious feelings, through the calling forth of ideal forms, to develop and strengthen the ethical judgment, rests chiefly on this fact. But even here, instruction cannot do everything. Who, for example, has never had the feeling of repentance, which the cleverest kind of instruction scarcely produces, and a desire to recover what has been lost? Who has not in the midst of a devout congregation felt the nearness of the omnipotent God, or been driven by some severe experience to the avowal, “Here God’s finger is visible!” — when religious instruction would scarcely

have been able to provide the lacking feelings in proper strength and depth? The moral feelings then must chiefly be lived, that is, must be evolved out of the practical relations of the child to life, before instruction can be referred to them, or the child "learn virtue." Where these are wanting, not instruction, but the surroundings must first operate on the mind of the pupil. The example of the teacher and of fellow-pupils, the intercourse with them during instruction and after it, the entire school-life, should show him in living reality those religious feelings and moral ideas which were to him hitherto unknown; the intercourse with fellow-pupils in study and play, the praise and punishment of the teacher, the daily school work and certain ceremonious arrangements and holidays place him in positions which easily become sources of moral convictions and religious feelings. Finally, however, the rigid order of the school and home, with their duties and unalterable customs and usages, foster and develop those moral and religious germs in the ways of conformity to custom. This is what Pestalozzi meant when he declared, "Virtue and faith must first be, and long continue to be a thing of the heart before they can become a thing of the reason." The animated feeling of every virtue must constantly precede the speaking of this virtue. This is the only way in which the experiences necessary to the province of ethical and religious interest can be obtained by the child and apperceiving ideas be provided.

We think, finally, of still another province of public school instruction in which it is especially difficult always to provide the requisite aids to apperception; namely, the particular branches of form instruction. Experience teaches that the pupil brings originally to the material of instruction in those branches only an indirect interest; and forms in-

terest him only on account of the things to which they belong ; his lines of thought in mathematics and language have grown together in the strictest manner with the real objects from which they arise. For the former owes very much to the latter ; intercourse with things not only secures to the ideas lasting clearness and distinctness, since it repeats them many times, but it leads also in the easiest manner to their understanding. It teaches, in the simplest way, their application. Every one possesses the greatest readiness of speech in that subject with whose contents he is most familiar. For the things which I know from the foundation up, over which I have sufficiently grouped my thoughts, the necessary forms of speech also stand at my disposal. Therefore the old rule : Hold fast the *thing*, the *words* will follow of themselves. Why can excellent and favorable books much more surely initiate into the secrets of a good style than a hundred well established paragraphs from a book on style ? Because the content and form of speech stand in the closest relation to each other, and the former cannot be given without the latter. In the same manner the subject of space is related to that of number. Here, also, is the strength and activity of the form ideas of the child, the ease with which they enter combinations essentially dependent upon the concrete observations which the child owes to the intercourse with things. If, then, it holds good that the child, in the knowledge of things, possesses valuable apperception ideas for the material of form-instruction, the road is set forth in which he can in the best manner acquire his established ideas through the concrete : instruction in form, at least in the public school, should not stand isolated, but should be joined to instruction in things. In accordance with this principle, we do not proceed, in the instruction in the mother-tongue, from language exercises which would be read slightly, and

therefore remain misunderstood, or from heterogeneous exercises, standing in no real connection with the examples and sentences, which can awaken no interest, but from a material that has already value and importance for the pupil, from a content that has been brought already to his understanding. This is the ground and foundation by which the boy, through comparison and the placing together of related forms, gradually and by his own activity derives from many individual language forms the grammatical principles by which, in the course of time, he works out for himself his grammar. While we give him further occasion to set forth regularly, in a simple and clear manner, oral and written, something that he has learned in the line of other instruction, we form his style in a far surer manner than when we, as too often happens, cause him, through selected exercises standing in no relation to the rest of instruction, to write about things for which he has no heart or no thought.

We proceed in arithmetic constantly, not only from denominate numbers, that is, from number ideas which are joined with ideas of things, because they are more intelligible and tangible than pure numbers, but even in this branch of instruction we remain in the closest relation with things as they are presented by the rest of instruction and by life. Meanwhile we work out these concrete notions carefully with regard to the required number ideas, drill the pupil in readiness of calculation, and bring him back constantly upon them, provided any obscurity and uncertainty shows itself. Finally, in regard to form teaching, concrete things here also form the starting-point of instruction. The child learns to recognize the simplest typical forms of bodies in the prominent objects of his environment; for example, in monuments, buildings, columns, etc. Before there is language of figures in the abstract, these forms must be comprehended from things.

Not before numerous triangles have been pointed out, measured, valued, and compared, should any general proposition of the triangle be given. Instruction must refer regularly to things, if the acquired geometrical principles are to find their application in practical life. For example, the pupil is drilled often in measuring and estimating the surface contents of court and garden in the calculation of the solid contents of the objects of his surroundings. In this manner a stream of apperceiving ideas will be conducted over from the province of things to that of form, and will constantly fill the abstract ideas of form with living content, making them grow together in the most intimate way with other lines of thought, protecting them from a shadowy past life and from an early oblivion after the school life is over.

We are at the end of our answer to the question, what can the teacher do for the subject of apperception? How can he provide for his instruction sufficient apperceiving ideas in the consciousness of the pupil? We found that it was his duty to gain a definite view into the pupil's range of thought, especially in the extremely important experience that they have acquired previous to all instruction, to brighten and deepen this and to enlarge it through suitable home instruction. We emphasized further that he must, in the most careful manner, join all his instruction to the acquired experience of the pupils in many ways, especially through advancing instruction.

It remains yet to direct our attention to the connection of the subject and the object of apperception. Indeed, as this lies in the nature of the subject under consideration, we have already touched this province many times in the course of the inquiry; but we could only in a very general manner mention the ways and means which bring about the connection. Now, however, it is our purpose to indicate the

special, systematic arrangements through which, in every particular case, a sure and intimate blending of the two factors is brought about, and to establish through the particular divisions into which the subject-matter of a branch must be analyzed, the steps of instruction that are necessary, provided a thorough and complete union of these factors is to come to pass.

3. THE PROPER UNION OF THE FACTORS OF APPERCEPTION IN LEARNING.

(The Process of Teaching.)

It has been already emphasized that the process of apperception does not by any means properly develop itself in the child; experience teaches rather that even under the most favorable circumstances when the child is offered the material of instruction for which it already possesses numerous apperceiving ideas, the connection of the old with the new not infrequently fails to be made. This is the case, if the consciousness of the pupil during instruction is either filled with foreign thoughts and feelings which do not permit the apperception helps to arise; or if the latter lack the requisite strength and clearness, the necessary order and completeness, and therefore power, to grasp apperceivingly the ideas called forth by instruction. Hence it does not suffice that the learner possesses apperception aids for the new; they must also be at his disposal with the greatest clearness at the right time and place. They must, likewise, in the moment of learning, stand at the threshold of consciousness to present to the new elements all that are related, and so to grasp the new knowledge as to prepare for it the right mood and the correct understanding. We conclude, however, that the presentation of the new should not be the first thing in instruction, that as a rule a stage of preparation must precede.

Fine tact forbids one to present, pell-mell, weighty and unexpected communications. The orator regards it as necessary, even with an adult audience, to preface his lecture with an introduction recalling known facts. Further, before reading a new book or scientific article, one calls forth his own experiences and thoughts concerning the matter, asking himself what the author indeed has to say, as the best means for an independent, intelligent connection of the new ideas. Every one knows that a merely mechanical memoriter connection of what is read can best be prevented by providing such a collection of his own ideas, even if they should be partly or entirely erroneous. Moreover, to important expected events that affect our individuality in an especial manner, the circumspect man opposes conceptions referring to the nature and consequences of such events so that they do not surprise him to his hurt. What is thus to the adult a condition for the independent reception of new knowledge and important experiences, is to the pupil a necessity. In a still higher degree than the man, the child requires time to collect and expand his apperceiving ideas. "Preparation is everything," holds good nowhere more than with him. In this preparation, however, the problem has to do with searching out, in the pupil's own range of experience, the old and known which is included in the new material of instruction and so working it over that it can enter into an inner connection with what is similar in the subject. It will be necessary to obviate in advance certain checkings of a quick flow of thought, to utilize all the ideas of the pupil which stand in relation to the new, and to explain and throw light upon them in order to bring about their reproduction and to raise them to a higher degree of clearness. For this purpose we must not content ourselves, indeed, with recalling particular facts that the child knows, with pointing towards this or

that which the instruction has already treated, without going deeper into the store of the learner's ideas. Just as little must we seek this preparation in a mere repetition of the preceding lessons, however necessary for our purpose such a repetition prove itself to be. We must rather devote to the apperceiving ideas a thorough consideration, a thorough examination which spares neither trouble nor time. We will not only allow the pupil to reproduce even the familiar domestic events of his life, which the school often thinks it must above all ignore, but we must more regularly cause him to express himself in a free, unrestrained manner about the subjects of his experience, not avoiding even the most peculiar related events, in order that a complete absorption in familiar ideas, those strongest aids to apperception, shall precede the presentation of the related new ideas. The pupil must first become at home again in definite old groups of thought; he must pass through these old groups with a certain warmth and ease, before we offer him the new; he must feel firm ground under his feet for the new mental operations that instruction exacts from him. If the preparatory conversation makes it apparent that the existing apperceiving ideas are too weak and unsatisfactory, it becomes necessary for the preparation to provide what is lacking. Often enough, therefore, we must first of all search out and traverse the old ways in which the ideas arose, in order that the experiences and observations may be repeated, and the ideas improved or strengthened. New ways also must often be open to experience and observation. School excursions, therefore, at this stage are suitable to those efforts, by which false, weak or incomplete aids to apperception receive their correction, clearness and completeness. From indefinite speaking, from a vague roaming around in the field of the child's experi-

ences, we are prevented and protected in advance by the definite aim which, during the preparation, both teacher and pupil always have in view. For from the beginning the pupil also must know the problem which the recitation hour has next to solve; he must know why we call back this or that known fact into his consciousness. Only when he knows the purpose of the exercise, do apperceiving ideas flow in rich fulness, and especially do those deepest ideas arise which the teacher would otherwise never understand how to value or to call forth; only then do the facts brought by the discussion receive for the pupil that inner dependence and elasticity which is indispensable to the reception of the new; only then can that expectation be excited in him which hastens on in advance into the province of the new material of instruction and prepares for it a quick and certain adoption; only then can he attempt, in the stage of preparation, by his own reflection, to seize in whole or part the object of instruction. The apperceiving ideas acquired in this and similar ways will frequently be collected and arranged. If we should pass over the material but once, and in the order in which it would occur by chance, many contradictions would remain unreconciled, and many principal thoughts not seldom be lost in a mass of incidentals. A brief summing up, suitable to the content of the ideas, and a separation of the essential from the unessential, is therefore absolutely necessary; and not less so, a sufficient repetition and impressing of that which, as yet, shows itself uncertain and wavering. When this is neglected, we stop half way, and apperception, in spite of the preparation, cannot be accomplished with the requisite ease.

The demand is also natural and justifiable that the ground for the new lesson be prepared in advance; yet opposed to this general truth there are manifold considerations and

objections. In the first place, a teacher may think he can cause the new to be assimilated even without a special preparatory step, and so in the presentation of the new matter reproduce the experiences of the pupil piecemeal, and introduce, or possibly seek to create, the requisite apperception aids by a subsequent explanation of what is offered. It may be also that the treatment of the series of ideas called up for apperception will proceed too rapidly and too superficially, without attaining the intended effect, or, if continued, will delay or check the pupil's movement of thought already directed toward the comprehension of the new, a state of things which little favors apperception. An historical lecture, which ventured to take nothing for granted and laboriously made all the explanations necessary for complete understanding, would be most unprofitable, and would leave behind about the same painful and tedious impression on the pupil that a poem furnished with innumerable marginal notes, or a text grown over with learned remarks, makes on adult readers. For as often as the lecturer interrupts the course of the narrative, to procure the necessary apperception aids, so often also will the strained expectation of the listener be diverted, and the main subject pressing rapidly forward will arrest the spiritual assimilation, and a lasting impression of violent delay in his current of ideas will overcome the pupil. It would be well, then, if the apperceiving ideas were provided by means of a thorough preparation that would complete and deepen the understanding of what is presented. Moreover, if the child has a previous comprehension, incomplete though it may be, he will have a basis in apperceiving ideas such that a gradual assimilation of the subject can take place. Where, on the other hand, such apperception aids are wanting, the new quickly sinks below the threshold of consciousness or is

wrongly perceived. And then it is only with great difficulty that an explanation can restore the ideas for assimilation, or entirely annul the disadvantages accruing from a false, incomplete comprehension; it will always remain a difficult and thankless task to make good again that which an insufficient apperception has spoiled, and to eradicate mistakes already fixed. Some have disputed the possibility of being able to place a limit in advance to each lesson, fearing that the logical carrying out of our demand will lead to artificial divisions, wholly indifferent to the child. Besides, they say, the general truth, the final theme, which seeks, for example, to develop a catechism or book of proverbs, could not possibly be announced to the child in advance. Certainly, the proper determination of the aim is not easily made in all subjects, as, for example, in natural science and in form instruction, where interesting practical questions in the life of nature and men, form the natural starting and terminal points of instruction. And it may be admitted that many of the tests hitherto published referring to the aim, for example, in biblical stories have not been correct. This merely signifies, however, that in the selection of the aim of the lesson, special care must be taken to avoid certain mistakes and misapprehensions. With this precaution, the announcement of a purpose in the whole plan has constantly proved itself not only possible, but also useful and necessary. We have always found that for every lesson-whole, a question or exercise or fact of experience could be produced, which announces the new in such a way that it no longer touches the pupil's ear as completely strange, but calls sufficient apperception helps into consciousness. But this announcement must never be permitted to take the form of a general idea or a general opinion; for it is clear that the abstract cannot be given, that it is rather to be gradually

developed from a group of similar ideas. Were we to give the pupil a principle in advance, as the recognized end to be attained, then almost all connecting points for this, and consequently for every basis of apperceiving activity, would be lacking. Therefore it has always been regarded as obvious, that only a concrete object is to be presented to the pupil, an object lying near to his previous experience and exciting lively expectation, an object or aim existing, actually in the absorption of new and interesting ideas. But where can such interesting ideas be found? Must not much be acquired for which in itself the child, at the time, feels no interest? Certainly, but if the child is indifferent concerning certain subjects of instruction, because he thinks he knows these well enough already, or because he undervalues their importance in human knowledge and business, an interest can be awakened, and he can, through the method of Socrates, by suitable questions be made aware that he really knows very little of the things referred to, that the cause of certain phenomena remains concealed; also that he has, without reason, held certain things as self-evident and uninteresting. For the child, facts must be converted into problems. That which in and of itself excites no interest must be used as a means of serving an interesting purpose. If the child, for example, is not especially interested in the consideration of dry forms of speech, who can blame him? And yet interest in such forms can immediately be acquired if we put them into connection with practical needs. This is shown in reading, and in the oral and written expression of thought. The child will use grammatical forms with eagerness, not for their own sake, but for the sake of being able to read well and with understanding, and for the sake of being able to express his ideas properly and exactly. By such methods, in subjects apparently the driest, an inter-

est can be secured that will lend to the apperceiving ideas the proper strength and vividness. Some have pointed out that in the work of preparation there is a temptation to dwell too long upon various incidental things, and that the teacher of little skill enters into these at length, coming tardily to the real matter in hand. The inference has been drawn from this that with beginners and unskilled teachers it is better to omit the preparation altogether. In fact, a preparation which is merely mechanical or which introduces too many details, conceals those defects and with them the danger of putting fatal weariness in place of childlike interest. It escapes this danger, however, when the aim is so clearly, personally and concretely seized that a rambling into the indefinite is impossible; when we call up to the mind of the pupil only so much of the known as the understanding of the new absolutely demands; when we do not rely on the accidental, but above all seek to place the pupil in the right situation and disposition. Limitation here also marks the master. But is the beginner, because he is not yet a master, never to try his skill in self-limitation, even if exposed here and there to the danger of making mistakes?

Have not different pupils different ranges of thought, so that one reproduces apperceptive notions where another obtains none? And is not attention different in spite of the good intent of the pupil? Can it therefore be asserted with certainty that the new material of instruction has been sufficiently prepared? And if not, what advantage has the new method over old ones? We may reply that the discerning, conscientious teacher, to whom every soul intrusted to him is a care, by means of solicitous observation of the individual pupils, during instruction and during recreation, by means of familiar intercourse with them on the play-ground or on excursions, by means of heartiest sympathy in the events of

peculiar interest to them, would certainly be able to understand a large part of the child's world of thought, and know how to individualize a great deal in his instruction. He would be able to lay hold in the most practical way upon the child's most active thoughts and inclinations. Moreover in the events of the preceding lessons and in school excursions there is produced a very rich and valuable treasure of apperceptive ideas, increasing with every hour, which are common to all the pupils, because they are acquired by common labor. And even supposing that varied appereceptive helps in acquiring the new knowledge by different pupils of the same class are offered, what difference does it make? If only the mental appropriation is most thoroughly accomplished by the pupil in his own way it matters not by what means it is done. But whatever is especially calculated to fix the ideas, to assimilate with knowledge already possessed, to bring what already exists in the mind into harmony with the new material before the mind, to awaken apperceptive notions, will be ratified a thousand fold by experience. Whenever the lesson starts with something interesting that attracts the attention of the pupils from the outset, the necessary apperceptive helps will seldom be lacking, far more seldom at least than when the unknown is brought forward unexpectedly and without aids¹ to apperception. The preparatory discussion will experience an essential limitation and abridgement in such cases where the work upon the immediately preceding lesson has aroused in the pupil, inquiry, expectation, reflection and doubt which are to find their solution, explanation and fulfillment in the new material

¹ No one will assert that the preparatory discussion will reach its purpose with all the children of a class. But if there be but little that is not understood, and that by only a few, it must be accepted and applied as an important aid in method.

offered. In such cases there is already found in the foreground of the child's consciousness a related range of thought, and therefore sufficient helps to apperception are easily brought forward by means of proper questions. The preceding applies especially to the advanced classes. The more advanced the pupil, the shorter the preparatory analytical discussion by the teacher, the more it may be left to the pupil to find the right means of acquiring the new for himself. It is the purpose of every methodically prepared lesson gradually to raise the pupil to such mental independence, and finally make the "analysis" by the teacher superfluous.

The Herbart School, especially Ziller, has emphasized, with no uncertain sound, the necessity of a preparatory step (the so-called "analysis") for the lesson, and they have given it a psychological basis. We meet indeed occasional pedagogues outside of this school who make similar requirements in teaching the lesson. Wangemann, for example (*Handreichung beim ersten Unterricht der Kleinen in der Gotteserkenntnis*), begins every biblical story with a "preparation," of which he gives the following as advantages gained: "It must enable the child upon hearing the biblical story the first time to comprehend at least the important matters perfectly. It will prevent the engendering and fixing of all sorts of preposterous and remarkable ideas in the mind which comes from listening to incomprehensible expressions. The preparation must do decidedly more than seek to awaken a right frame of mind. It must seek out the conditions and relations of life, relations that the story under consideration introduces, and endeavor to bring them into the world in which the child lives, hold them up to his view, call particular attention to them, and elucidate them, in order to prepare the understanding for what the story reveals later."

Curtmann recommends a like procedure in his treatment of the Reading Book (*Lehrbuch der Erziehung und des Unterrichts*), in which he would have every selection that is not easily understood preceded by an explanatory introduction. He says, "Before the child begins to read, it must know what it is going to read about. The pupil must read with attention and with interest which the teacher has excited before the reading begins. The difficulties also, which would interfere with the interest, must be removed beforehand. Everything most necessary to a good understanding of the subject should be explained at the outset, and not at the end when the best impressions are effaced. The teacher must connect every new reading lesson with the sense perceptions already obtained or with what has already been read, and thereby make it comprehensible."

It has been repeatedly attempted, especially recently, to reform and improve the old-fashioned common practice according to these ideas. But there are nevertheless but comparatively few persons who place themselves definitely and logically in favor of preparing the pupils for each new lesson, and even they with their criticisms challenge the manner of carrying out such preparation. It seems most extraordinary that there shall be a procedure in instruction, that owes its warrant to general psychological laws and that studies the need of each pupil narrowed to a single branch, or to a definite part of a branch (*e. g.* a piece of poetry), that it is considered necessary to prepare the pupil for apperceptive notions in biblical history or in a reading lesson, while in other subjects of instruction such preparation may be omitted. We are liable to forget that the apperceptive process remains the same everywhere, and in no field of knowledge can anything new be appropriated unless there are found in the mind of the child well grounded, related thoughts.

In most cases the preparatory discussion should not make reference to the ultimate purpose of the lesson; this will be indicated either at the end of the preparation or not at all, because it is better to lead the child unconsciously to the end sought, and to prepare it for a kind of surprise. By mentioning the end sought beforehand, the will of the learner will be but little helped, and the development of the most interesting experiences of the child will be lost. This seems to be beyond dispute. Many believe that they are preparing for the presentation of the new while they are giving the new itself in the preparatory discussion. They seek, for example, to make the mastery of an epic poem easy by a simple description, while they present the thought of the poem beforehand. They precede the presentation of a biblical story according to the wording of the biblical text by most childish "preparatory narration," which is supposed to remove the difficulties of Luther's translation. Or they bring forward in the preparatory elucidation certain concepts, facts and examples which are suggested in the material of instruction, when it is doubtful whether they come at all within the limits of the individual experiences of the child. They usher in the new by means of "introductions," which perhaps in certain objective respects are proper, but from a pedagogical standpoint must be regarded as entirely impracticable and mistaken. For their content is not formed by old, familiar ideas of the pupil, which only need to be excited in order to return clear and living into consciousness, but new, unknown ones, with which the mind must struggle if it masters them.

But it does not need to be mentioned that ideas which need the help of apperception themselves in order to become fixed, ideas which, because of momentary restraint, fall into lasting obscurity, are not suited to work out a strong, apper-

ceptive power. It is not learned introductions and eloquent recitals of new, unknown experiences that smooth the way to the comprehension of the new easily and surely, but the help must spring from the soul of the pupil, from his strongest and most vivid range of ideas, if an assimilation is ever to be reached. Therefore, from first to last, that form of preparation in which the teacher alone takes part, which subjects the pupil to discourses by the teacher and which the pupil must silently follow, must be declared inadmissible. For it is not the teacher but the learner that must do the principal work; to the former belongs the duty of bringing forward the most important apperceptive helps. But a simple examining and questioning, that merely bring out a part of the treasures of the child's knowledge, hindering his thought activity, will by no means answer our purpose.

The apperceptive ideas of the pupil are brought out the best and easiest if he is led by means of questions to express his own knowledge freely and unhindered. This he will do in a connected way if the preparatory discussion takes the form of a familiar conversation. Then the dulllest mind has time to act, and even the retiring disposition is encouraged by the confidential tone of conversation. No one should be omitted in the relation of his experience, and each, according to the measure of his knowledge, will add something to the new thought-structure. Every one rejoices that his own knowledge, which has heretofore been smuggled in as forbidden ware as compared with the word of the teacher, is recognized and respected, and each looks forward to every new lesson with redoubled interest. This condition of mind is the most favorable that the new material can meet; the apperceptive process is introduced in the very best way possible.

The instruction must now pass to the second step, the presentation of the new material. This consists in either

relating a story (to small children), reading a selection or historical topic (to riper pupils), or in showing and carefully observing a natural object, a geometrical body, an exercise in arithmetic for the solution of a problem, a geographical subject exhibited upon the board or sought upon a map and described, an incident in natural science brought up and investigated. It is important so to adapt and apply the object to be apperceived that all of its parts which linger on the threshold of consciousness may easily and surely unite with the ideas the child already possesses. It is clear that even well prepared matter cannot be thoroughly mastered if the ideas are forced too rapidly upon the consciousness of the learner, or if they are too weakly and obscurely presented. The pupil will not become master of the material if he is overwhelmed with too much at once, if the teacher fails to linger upon difficult points with necessary stress, if the material is not presented in proper order and with proper clearness, and if the attention is not held. The more time given to the individual members or parts of the object to be studied in order that it may unfold clearly and intelligently in the consciousness of the children, the more opportunity the pupil has to appropriate the presented notions that are to be apperceived, the better will they be apperceived and the better learned. It follows therefore that the amount of material given must be measured by the capacity of the pupil, so that neither too much nor too little may be asked of him; such material must be properly connected in order that he shall not receive it as a mass, but rather that it may be fixed in his mind according to the law of successive clearness, from section to section, from item to item. Thus are made the necessary pauses which give opportunity for a review of the ground covered and which allow a moment of reflection to follow regularly a state of deep absorption in the subject. Let

short, topical statements and key-words be placed on the blackboard, which indicate the particular points on which attention must be fixed, and which assist in retaining the idea. Finally, the separate parts, each of which has been made prominent for the sake of clearness, must be united and combined into a unity in consciousness.

“The change from absorption to reflection must take place exactly as inhalation follows exhalation in physical life; it is the process of mental respiration.” Nowhere has our claim a greater justification than in the beginning of a science, or in elementary instruction. It is everywhere recognized, and indeed it has become a proverb, that in every department of human knowledge, the beginning is the most difficult. It is true that there are but few ideas in the child’s mind with which the new material can readily assimilate; therefore it needs plenty of time for the fusion of the two groups of ideas to take place, and because of this the assimilation of the new and unknown is at first so uncertain and doubtful. If one should hasten from absorption to absorption, or should at the stage where the child learns most slowly, in order to gain time, make too rapid progress, or perhaps, because the subject is interesting, seek to give the greatest amount of material at one time, an important factor would be lacking in the process of mental respiration. The principal pillars of the structure of thought now forming would be undermined and only superficial knowledge would be the result.

Next to the proper arrangement of every subject to be taught, there is still another means most appropriate to assist in a thorough fusion of the new with the present store of ideas; let the pupil as often as possible strive to arrive at the wished-for knowledge in his own, self-chosen way. Let him attempt to solve the arithmetical exercise or the problem in natural

science, or to explain an extraordinary phenomenon in his own way; let him reflect upon the voiceless symbols of the geographical map; let him by means of careful observation and independent description appropriate to himself that which the teacher's instruction would otherwise give him. Let him observe for himself without outside help, how the connection of historical facts, the causes and effects of certain events, the motives and characters of the chief persons involved are to be understood. The main purpose should be separated into subordinate purposes, thereby making it possible for the pupil to find out and conclude a great deal for himself, which otherwise must be told or shown him.¹

Of course he will not always choose the best and directest way, but certainly it will be the easiest way for him, that is, the one in which he finds the greatest number of apperceptive helps. His course of thought will need in many points to be extended and corrected; but it has the advantage that nothing unknown to him has been brought in, nothing that he does not possess, and it takes root in his store of ideas, and can easily be examined by him from every point of view. Even if the pupil is able to appropriate the new matter only imperfectly, his work is not to be considered as wholly lost. "He has at least obtained a glance at the material by means of this preliminary attempt at free presentation, which, when he has a more correct method, acts as a help to the memory." Many doubts are resolved, many hindrances removed, and so many related ideas are awakened, that the new facts find already in the

¹ "Neither discoveries nor inventions are made in the school; neither are discoveries or inventions brought to maturity there, but the pupils should be so trained as to discover what has already been discovered, to investigate what has been investigated, to seek for what has been found."—LAZARUS.

mind plenty of material with which to connect. But the teacher must guard against unnecessarily narrowing the thought-activities of the pupil, and should bring him forward by means of "suggestive questions" (*Scheinfragen*) which indeed may be rich in content, and treat of the most important and essential things, but which the child should find out for himself. The teacher will seek to lead him preferably by questions which give sufficient play to his reflection, as for example: What must now take place? What is the next step? What is still lacking? "Material help will be given only when the suggestive questions do not suffice; but when used they must be so comprehensible, definite and forceful that the transition takes place without anticipating those things that the pupil can grasp of himself, and they must be helps to the pupil just where he is helpless."

But while we exercise so much care that the pupil shall reach the end sought by self-chosen means, if we bow before superficial adaptation, whereby the new material is simply committed to memory without comprehending, we retard (not necessarily make more difficult) the process of apperception for the purpose of gaining time and adding the greatest possible number of new notions at the expense of perfect mastery and complete assimilation on the part of the pupil. For we possess nothing surer and more lasting, nothing that is able to incite the volition, like that which we have found out for ourselves by our own powers, and have worked out alone.¹

¹We must criticise the following assertion by Palmer: "It is a mistaken idea that the child receives more good or is surer of a thing if he has found out the truth for himself, than if it has been given him in a thorough manner by the teacher." On the contrary, Schiller says (*Über die notwendigen Grenzen beim Gebrauch schöner Formen*): "There is no way for the results of thinking to reach the will and the inner life of the child except through self-activity. Nothing but that which has already become a living deed within us, can become such in the outer world."

We have indicated above that one of the objects of preparation is to excite expectation in the pupil, which will be a help in leading him to the mastery of the lesson for himself. The new lesson will not always meet such expectations; it will in many points undoubtedly be antagonistic to the apperceptive notions of the child. It would be easy in such cases to confirm a fickle and therefore wrong apperception. When the parts of the new material that contradict one another are made too little prominent, and those elements that are related and resemble each other are brought forward too rapidly in effecting a union, the antithesis will be eclipsed and will not find a place in consciousness. Then the learner overlooks the peculiar characteristics of the lesson, and his conception is subjective and false, or at least incomplete. This danger is sometimes all the greater, the more thorough the preparatory discussion has been, the more one attempts to come down to the familiar, individual range of thought belonging to the pupil, and to find ideas already in the mind with which the new ones will harmonize. But this danger may be avoided if in the presentation of the lesson the antitheses are brought out sharply and definitely, if the teacher lingers longer and with particular emphasis upon them, and if the pupil's attention is especially called to them. It is proper also to delay the combination of the elements of the related ideas until the antithetical ones have fully come into consciousness and have become an inseparable part of the assimilation; it is also important to delay the progress of apperception in a measure, in order that it may be the more thorough and objective. Accordingly, the historical story, for example, will produce the deeper and more correct comprehension of historical persons and events, the better the present is transposed into past times and past civilizations, and the better the story pictures to the mind of

the child the prominent peculiarities of an historical people or race, as they asserted themselves to the world in language, literature, customs, and manner of living. The study of historical authors is recommended to maturer youth for the same reason; for no manual of instruction can show the antithesis between our modern culture and that of the past like the work of an old ehronieler, who faithfully pictures the events and deeds, the views of life, the thoughts, the feelings, the customs, and the language of his time.

Greatest care must be exercised in natural science instruction, in the investigation and experiments concerning those phenomena which in every-day life are surrounded by false and baseless notions, — take, for example, the precepts that our peasants follow, the fairy tales of our nurses concerning certain animals, etc. The child, of course, brings these notions with him when he enters school. The same caution* is needed in religious instruction with reference to superstitious notions, customs and practices, which are handed down from generation to generation.

The presentation of the new material closes with a recapitulation and review of the whole by the pupil. He should now show by a systematic reproduction of the lesson presented that he has fully understood the subject. "The best test that a person has understood a thing is, that he can reproduce it in his own way, with his own words" (Herder). So, then, if the separate parts of the new are more closely united by many repetitions, the entirety will be the more strongly impressed upon the mind. To every lesson which offers something new, belongs the mission of making a definite, well-defined series of ideas the inalienable property of the child. But the formation of such a fixed series of ideas would be furthered but little if the repetition and combination of the material learned should

proceed in the form of repeated questioning and analyzing of such material, *i. e.*, if the pupil is not required to give the whole matter at once, but is allowed to give it piecemeal. Then, under the most favorable circumstances, "the parts in his hand, he may hold and class, but the spiritual link is, alas, lost." Then apperception would, to all outward appearance, never reach perfection. We always require, therefore, a complete, free narration, an independent, connected presentation of what is learned. We allow the pupil to speak freely and without hindrance, without interrupting his course of thought by questions or suggestions. As a rule, we do not interfere even when he mixes in error or forgets important things; but after the conclusion of his presentation, we ask the whole class to rectify errors, supply deficiencies and correct an incomplete rendering. Further, we must avoid forcing the pupils to comprehend or grasp the whole by means of prepared forms of expression that are not clear to them. For example, we do not require the content of a biblical story to be given strictly in the words of the sacred writer, if the child does not choose those forms of expression of his own accord. For by reason of the intimate connection between word and thought, between condition of mind and language, which do not correspond to his individual thought relations, he would have to give up a large part of his apperceptions, and accept expressions which are nothing more than empty words to him. It is far more important that the child should express himself in his own words, in the common, familiar language of the people, of course free from dialect, rather than in unfamiliar book-language; the former is far more closely related to his apperceptions. We even permit certain peculiarities of childish expression, if they are not ungrammatical, and in the case of serious mistakes allow only a brief, explicit

correction to be made. For a smooth, connected presentation of the child's own thought has, in our eyes, an incomparably greater value than a discourse interrupted and corrected a hundred times by the teacher, in which there is no longer anything original or characteristic of the child, but a few pretty forms of speech that the child has committed to memory and which do not require him to think.

But when can one say that such a spontaneous and proper recitation of the subject taught has fulfilled its purpose? Certainly not until it is thoroughly understood and has taken full possession of the heart and being of the child. Therefore it behooves us to guard earnestly against premature reviews. It would be, for example, a grave error if one should attempt to fix the content of a description, the bare facts of a biblical story, before they are fully understood. Apperception reaches its best fulfilment when suggestive material is considered, not suddenly, but gradually, and it needs plenty of time for this purpose. Skillful questions and hints by the teacher must lead the child to correct wrong perceptions, to clear up dark places, and in general, to impress the meaning, and the moral and religious truths of the topic. And then, for the first time, when apperception is thoroughly completed, will the child be able to speak, not from memory, but out of the depths of his soul; then the words will flow from the lips easily and warmly out of the abundance of the heart. But when the text is being impressed, before it is fully ingrafted into the thoughts and feelings of the little ones, and before it is understood in every part, many will be able to give neither a free nor a connected statement of what has been heard. In the former case there would be empty repetitions from memory and only partial perception, not apperception attained; in a word, it would be mechanical learning. If the child has become

accustomed to rely upon the words of the teacher or of the book, he no longer feels the need of searching out the deeper meaning of the subject, and of drawing a picture of it for himself by means of full and lively contemplation.

If the principal work, the statement or reproduction of the story, is in the opinion of the children already accomplished, the succeeding elucidation will find indifferent hearers and unresponsive hearts.

With the oral and written representation of the thing learned, the process of assimilation, as it appears, is finished, and we could consequently close our investigation concerning special, methodical arrangements for the purpose of cordial union of the subject and object of apprehension. But instruction generally carries the treatment of the new material still a step further; the material appropriation of the lesson does not suffice. The instruction seeks, where it is possible, to place the pupil in possession of things that are universally accepted and necessary, of general laws and truths that are contained in the material treated. The pupil should on the basis of the individual notions already obtained, and of his concrete experiences, be able to rise to a comprehension of the ideas as they are systematically arranged in text-books. Then these ideas and laws lend to the mind of the pupil the first true solidity and assurance; they complete for the first time the appropriation of the unknown. They are at the same time the organs of apprehension, with the aid of which new experiences can be quickly comprehended and rightly judged. It has to do therefore with the introduction of a process of abstraction, and since this, as we have already seen, presents only a peculiar kind of mental acquisition, so the process of apprehension is followed by a second process of the same character, which the results of the preceding knowledge appro-

priated, changed as it were into choicer, finer products, and which distinguish the primary ideas from the secondary. We have already repeatedly considered these appereceptive processes, and may therefore be able to grasp the separate methodical steps that are necessary for their introduction and elaboration. First of all it is necessary to separate the individual notions and facts, from which general truths are evolved, from all other material, and to connect them with similar perceptions. These can be derived from knowledge already obtained by instruction, as well as from the other experiences of the pupil. Results also which are added through one's own reflection are not excluded. But in every case only such things as are clearly related and are fully known should be put together. Everything possible must not be brought in because of a remote similarity; but only such material as awakens closely connected thoughts in the minds of the children. When the related ideas are united and have been carefully compared with one another, a mutual cessation of the unessential, opposing characteristics will surely take place; they become obscure and disappear for that reason before those parts of the structure that are common to all ideas, and reach a high degree of clearness and strength by means of manifold repetition. Whatever within the circle of knowledge is brought systematically and with special plainness into consciousness and firmly fixed in proper order, constitutes the essential, necessary characteristics of an idea or the content of a general law or a universal judgment. So we reach the universal by the way of combination, of association.

The concepts obtained from concrete objects and with which they are still more or less connected, will be distinguished and fixed in a further step, that of systematizing or combining. The oral expression for the result of the new

apperception will become fixed, and it "will be brought into properly arranged, systematic connection with the known material, and that which has been learned will be thoroughly impressed upon the mind." In this way the pupil gradually gains by his own effort the individual, properly arranged principles that the text-books present. A long chain of reasoning, an ingeniously arranged, logical development is not needed in either this or the preceding step. For it is to be feared that the pupil who is led unconsciously through a long, logical course of reasoning to a certain result, will lose his desire to examine the reasons on which it is based, and also the connection between the concept and the fundamental notion in which the concept takes its root.

Or suppose the pupil is really able independently to repeat the ingenious, logical sequences that we find in many (not in all) categories. So long as he is not able to do that, he is not master of the subject. Still, perhaps, the logical evidence of the concept or principle, which has been developed, is sufficient in itself so that the pupil is able to dispense with the review of the path in which the knowledge was obtained. Unfortunately universal concepts and judgments are not like ripe fruits, which must be picked from the trees on which they grow in order to preserve and utilize. They are mental products, which cannot be conceived aside from the ideas out of which they sprang, which exist only in and with them, which, in reality, are not separated but only differentiated from them.

A concept, a general truth, is our real possession only when we are vividly conscious of the concrete facts from which it has been derived, or other similar facts. When a logical characteristic or the exact words of a general judgment have escaped us, we should be able to call it back into consciousness by means of the concrete facts. And only so

far as we are able to do this has the universal any logical evidence for us.¹ The words of Scripture, "The prayer of the righteous availeth much," is nothing but an empty form without evidence or force to him who recalls no individual ease of prayer either by himself or others.

If now the teacher omits requiring the pupil to survey the path by which he acquires concepts, and carefully to examine the connection between these and his fundamental notions, the evidence of the developed principle or concept is certainly not thoroughly fixed in the mind of the pupil. But in order to avoid this danger, and to enable the pupil to produce at will the general results of his intellectual work, by methods well understood by him and in which he has confidence, or at least to maintain the concrete foundations of such knowledge in the mind, the development of the universal must not be attempted by means of a long, cleverly compounded course of reasoning. It may be reached by simple means, yet without too little thinking. The more thoroughly the pupil has appropriated the preliminary concrete culture-material, and the more related notions are associated with the newly gained knowledge, the easier the process of abstraction is incited by a few questions. When the pupil hesitates, it is better, in ninety-nine cases out

¹ The direct evidence of our thinking always has its source in immediate sense-perception. Therefore the translation of the word "Evidence" as the "quality of being visible" (*Anschaulichkeit*) is not far out of the way. — WUNDT, *Logik*, p. 75.

Instead of leading the child's mind far beyond the immediate objective world into the world of abstract ideas, and holding it there as long and closely as possible, teaching must rather get away from abstractions as soon as possible and return to concrete phenomena. Otherwise the longer and more exclusively the children wander about among concepts, the more certainly does experience prove that this very cramming process leads them away from individual, independent thinking, instead of assisting them in it. — PFISTERER, *Pädagog. Psychologie*, p. 245.

of a hundred, instead of a series of questions or a line of reasoning, to go back to his fundamental ideas from which the concept should be evolved. This in all probability needs supplementing and correcting, or, perhaps, fortifying and explaining.

The process of abstraction ends with the establishing and arranging of knowledge into a system, and its inculcation (with reference to the form as well). It may now be asked whether with this the methodical treatment of the material of instruction has reached its purpose, whether the appropriation of the universal and the abstract is so fully attained, that all that remains, namely the application and practical utilization of the acquired concepts, laws, and so forth, may not be left to the pupil. Experience gathered from all sides has proved, that among the very teachers who are most zealous in leading their pupils to a thorough understanding of the objects employed in teaching, not a few are inclined to answer this question affirmatively. They believe that when a principle is made clear, its use is assured; they believe that with the introduction of the subject-matter into the understanding everything is completed, and apperception is accomplished in the best manner. This is a wide-spread error of our "enlightened" age, under the consequences of which our school practice greatly suffers. One goes from one extreme to the other: while formerly a hard and soulless method of teaching laid the chief stress upon cramming the material into the children without stopping to ask whether it was understood, in our time the tendency is seriously to neglect the drilling and the application of the lesson. And the teacher who does his duty in this matter, is in danger of the reproach, "mechanical training," "spirit-killing grinding," "tiresome reiteration," and such like forceful pedagogical expressions. On the other

hand there is the ever returning complaint that our youth have learned indeed much, yet know but little; that they possess a great deal of knowledge, but limited readiness in its use, and that a large part of the knowledge they get is forgotten as soon as they are out of school.¹

The application of universal concepts to the concrete seldom comes of itself; it must be taught, shown, and practiced in every branch of study. "That you understand a thing thoroughly is not enough; it must be at your tongue's end, — then you use it authoritatively."

When the reviewing and applying are omitted, when the range of thought is constructed without being united in every possible way with the other groups of ideas, the power of influencing thoughts subordinate to it is lost, no matter how clear the range of thought may be in itself. Then it forms as it were an upper house of ideas sufficient in itself, without recognizing the lower house, or taking into account any other ideas. It thus becomes clear that an application of the systematic combination of the matter learned must follow. The object of this step is not to go over the work repeatedly and in every conceivable way in order that it may be easily brought into use at will, but to bring the material into closest relation and liveliest assimilation with the pupil's present range of thought. It must enable the pupil by many practical examples to discover the universal in the concrete material of all branches of knowledge, to comprehend it from every standpoint, and thus easily pass onward from the concrete to the abstract. It must cause him as often as possible to enter new fields of

¹Perhaps the worst thing an evil genius has presented this age is "Knowledge without ability to use it." — PESTALOZZI, *Wie Gertrud etc.*, XII. — The well-known expression, "Knowledge is power," is only half true. A much better rendering would be: "Ability to do (*Können*) is power."

thought through concepts and rules already in his possession. It must lay before him numerous, judicious problems for solution, and require in oral and written presentations free application of the knowledge gained. A reverse practice of proceeding from the universal to the individual is also recommended. What we demand here has already been practiced in a certain sense for a long time in one branch, namely, in arithmetic. In this it never occurs to any to leave the application of a rule to the child; and whoever should attempt it would soon be enlightened by the complete failure that would result. One may well wonder that like experiences in most other branches have not called forth equal discernment, and the same procedure as in arithmetic. For it is beyond question that, *e. g.*, in moral instruction, quite as little as in arithmetic may general principles be used with the pupil, without assuring their use by causing their absorption through numerous examples, and by introduction into such relations of life as call out the moral judgment of the pupil.

It is conceded that all universal, historical truths, all geometrical theorems and physical laws, can only be inalienably appropriated when the instruction leads them into closest connection with living questions and exigencies, and offers examples from the practical life and experience of the child for solution. Every subject taught, therefore, should have an exercise and drill book, as in arithmetic; or at least the application of the material learned must be assured by means of such repetitions as are made in teaching mathematics. For constant, manifold use of the material taught not only intensifies the clearness of it, but it also assimilates it with numerous ranges of thought, so that a fluent reproduction is assured. It brings forward the plain, comprehensible characteristics which the pupil again and again recognizes in

concrete things. It makes so many concrete fields subject to the universal that the latter is supported as with countless pillars, and is retained in consciousness by a rich treasure of strong sense-perceptions. In a word, it gives to apperception its first real foundation. In this manner it is provided that the newly learned facts shall not remain as dead material in the midst of acquired notions, but shall develop an assured activity and impulsive power. Knowledge now becomes power, and power becomes volition.

When the pupil does not put away his school thoughts with his school implements, but likes to make use of what he has learned in school outside of it: when, for example, he borrows the characters of history and imitates them in work and play; when he carries out practically what he has learned in natural history; when he voluntarily seeks to extend and fix what he has learned, by observation and by diligent research; then a proper mental activity has been attained, then we see knowledge that is in the very best way to be transposed into volition. That is what Goethe meant when he said, "The secret of teaching consists in reducing problems to postulates."

There are, therefore, five methodical steps which must be taken in the treatment of a lesson. The preparation (analysis), the presentation (synthesis), the combination (association), the recapitulation (system), and the application. They indicate the method by which a complete apperception of the culture-material is accomplished; first, careful observation (steps one and two), then proper combination (steps three and four), and, lastly, practical realization of the result of the lesson (fifth step). The teacher must follow this course, as a rule, although freedom is allowed him in special cases.

Such freedom is allowable, for example, when there is not

sufficient time in a lesson to present all the material as a unit. Then, only so much of the analytical material should be introduced in the preparation as is necessary for the particular new material brought forward in this recitation. In this case the analysis will not appear in its completeness, but will be given in parts as is needed for the separate topics, preparatory to synthesis. We could proceed in like manner when the great variety of material to be analyzed threatens to disturb the unity of the analysis.

If, furthermore, the acquired culture-material is so rich in generally accepted truths that it gives rise to more than one concept or one rule, a single concept must be brought to full apprehension before another is introduced. In this way the steps, association, system, and application, will be employed several times, at least as often as is necessary to evolve the universal and generally accepted.¹

This requirement presupposes indeed a definite, pedagogically correct choice in the subject-matter of instruction. For, without question, encyclopædic presentations, or disconnected topics in history, do not, as a rule, admit of a complete combination and a thorough treatment of the lesson according to the formal steps. To one who holds inflexibly to certain lines in choice of material, the application of the formal steps will easily become merely a routine. The correct result can only be attained when care is exercised to present to the pupil an entire and complete view of the whole subject. The formal steps bring forward important, valuable, and connected material, which should be separated into a series of "methodical units." Under these units is included not

¹ For an extended treatment of these topics, see McMurry's "General Method," Public School Publishing Company, Bloomington, Illinois, or DeGarmo's "Essentials of Method," D. C. Heath & Co., Boston. See also Rein's "Outlines of Pedagogics," C. W. Bardeen, Syracuse, N. Y.

merely a part, or a topic of some subject, but a concrete whole, a group of valuable (internal or external) perceptions, which contain an important concept or a universal truth. Nor does it suffice to group favorite subjects and separate them into topics, but attention must be paid to the articulation of the material, considered as to its culture content, and how it presents itself in general and in all applicable cases. The requirement as to the treatment of the material according to the formal steps applies, as we have seen, only for subjects in which a new concrete culture-material can be intelligently assimilated and its elements brought forward towards abstraction.

Hence it follows that there are two essential limitations in applying our general principle. In the first place, there is no doubt that the subjects of general review and examination, the objects studied — school journeys, in so far as the observations made are classified, likewise those subjects which require technical skill in their acquirement, do not require so close an application of the formal steps. For here it does not concern the knowledge already gained, or the acquiring of new truths, but the review of ideas, or of bodily activity.

A second case is possible when a lesson offers, indeed, new, concrete material, but composed only of known, well comprehended elements. A piece in reading, an historical narration, a natural history or geography theme often brings simply a new sense-perception to an already acquired concept, a confirmation of knowledge already possessed. In this case it would manifestly be forcing the culture-material, if one should insist upon the use of all the five formal steps, and should associate, systematize and apply where there is nothing new to abstract. It is then sufficient to allow the pupils to recognize what is valid in the concrete, but for the rest to conclude the methodical treatment, with a thoughtful com-

bination of the new material. Or the new material may first be explained, and then, when one or more related topics or branches are brought in and appropriated, in the same manner related third, fourth and fifth steps may follow the several syntheses.

When, finally, material for teaching is offered that is rich in concepts rather than sense-perceptions, *i. e.*, in abstract form suitable for teaching, the question of methodical unity cannot enter; for the latter always arises from concrete material. A text of scripture, an article of the catechism, a sacred hymn, cannot be treated according to the formal steps. They will, in most cases, need to be united to one of the units of historical or religious instruction, which prepares for a correct understanding of them. When the child has grasped the real content on the basis of a rich material obtained by sense-perception, when he succeeds in fixing the content by means of the steps of the system, these steps give the knowledge obtained a classical form, or they serve him as an authoritative confirmation. But how is it when they arise only after instruction in biblical history? Many parts of the Bible must necessarily be subjects for special lessons after the common-school course (with us Sunday-school) is ended; take, for example, many important chapters from the Epistles.

The pupil should be able, when he enters upon the practical duties of life, by diligent and intelligent reading of the scriptures, to extend his knowledge and find strength and comfort in the hour of sorrow and temptation. Systematic instruction in the catechism will have an important place in the course of study. But what enters here as abstract content of instruction should not be developed by the method of observation and abstraction according to the formal steps, but it should be presented to the pupil directly; he should

be able to help himself under direction of the teacher, aided by a rich treasure of religious views and experiences, and he will learn to understand and grasp the truth for himself. By this means he will show that the persons and deeds of sacred history have life and power in his soul. And so he applies in a single step of method what he has learned in religious conviction and insight in all the preceding years.

To sum up: when the teaching presents no new, concrete culture-material for conscious appropriation, or when this material contains no new general elements, the formal steps cannot be followed.

As in the case of culture-material, so the general acceptance of the formal steps experiences a limitation with respect to the ability of different children to acquire.

We have seen that the complete assimilation of matter to be learned involves a double process of apperception; that it ends in a process of abstraction, a process of condensation of what has been newly learned in general notions and general truths. The formal steps are together intended to secure the carrying out of this process to completion. But the pupil in the lower grades of the public school is but little disposed or prepared to perform the act of logical abstraction. His strength and interest are still so taken up with the reception of new ideas, the number of his definite perceptions of the various classes represented in the different spheres of experience is still so insufficient, that to demand of him the formation of general notions—even though it be but in the form of psychological ideas¹—

¹ The author refers here to the distinction between "logical" and "psychological" ideas, the former being ideas representing the essential character of the several particulars involved, while "psychological" ideas are unscientific generalizations, in which the process of abstraction has not been completed, leaving therefore in the abstraction still many unessential qualities. —*Trans.*

would be for the most part to demand in vain a very unfamiliar labor. *Generalization must not be premature; it must always come out as ripe fruit from a fullness of similar concrete experiences. It is not to be developed artificially, if it is not to remain an empty word, a plant without roots. It should not appear until the richness of the material of instruction and the very variety of what is learned compel the combination and arrangement of the essential elements in a generalization.* The pupil in the lower grades must accordingly be spared the effort of abstraction. The process of apperception will always be brought to an end with the first division, that is, with providing for the thorough observation and understanding of the new matter for its own sake. The essential and significant elements of it are to be specially emphasized, even if only as a particular observation, and the pupils are gently to be led to join that which is learned with similar concepts, forming groups or series according to the measure of the pupil's experience. Finally, the teacher should seek by varied exercises to insure the greatest possible readiness in gaining these desired results of instruction. In this way there is secured a gradual preparation for later abstraction in the same field, for the comprehension of the ideal and universally valid principles involved in the material of instruction; thus the pupil learns by and by to proceed from the first less complete apperception to that which is more thorough and perfect.

Such is also the case in certain instances even with the more mature scholar. For even he is not always able to draw out at once the treasure of ideal and universally valid principles presented in the concrete material of instruction. When he first begins to work his way into a new field of knowledge, where fundamental principles, the beginnings of a new study, are involved—as in the case of a new language

—the pupil will be able only with difficulty to proceed to the logical comprehension of the subject. He has, as yet, at his command too few definite and similar facts to be able to determine, by a process of abstraction, the logical content of all subject-matter of instruction. Here, likewise, the teacher will be obliged — for the beginning, at least — to give up the complete carrying out of the process of apperception. In that case the elaboration of the material of instruction ends with the acquisition of series and groups of ideas, as, for example, of the traits of an historical person, a series of dates, a group of grammatical forms, the description of a country, the drawing of mountains and river valleys — and it must be reserved to a later consideration to unite these results with others into a higher form of knowledge.

It might be urged against us that in this way the culture-content of the material for instruction is but imperfectly appropriated, in so far as the pupil does not rise to an ideal comprehension of that content. But while the necessary maturity and experience required for such comprehension are undoubtedly lacking to the scholar in the lower grade, while he still prefers to think in sense-perceptions, and the mere reception and uniting of the elements of a new sphere of knowledge demand the full mental power of the more mature scholar, we must, — whether willingly or not — take this fact into account, and not for the sake of a stiff formula introduce system and application where there is nothing, as yet, to abstract.

Besides, it is quite possible, while traversing only a part of the two processes of apperception, to secure the appropriation by the pupil of the important elements of the material of instruction according to his power of apprehension at the time. When, for example, we direct the mind of the child from concrete facts of Sacred History to an

intimation of the goodness and wisdom of God, when the pupil is led clearly to comprehend and fix in mind the ethical traits which command our approbation in the historical person, when in the consideration of a subject in geography or natural history, we bring out certain typical properties into sharp relief, or in language lessons place related forms side by side, in all these cases we make the scholar distinctly conscious of the essential, significant, and universally valid elements of the material of instruction, even if only in the form of an observation. When now the instruction in each department produces more and more such valuable typical observations and joins them together in groups and series, when finally these become so numerous as to lead to their union in a general notion or a general truth, then, at length, all those concrete departments of experience which belong to the generalization, without being traversed in a process of abstraction, acquire for the pupil increased clearness and significance, through their relation to that generalization. So the thorough assimilation of former materials of instruction is accomplished by retroactive apperception, and the culture-value which they hold is secured to the pupil in a natural way — without over-haste or premature generalizing. A second elaboration of the same material of instruction, as demanded by the theory of concentric circles,¹ is then unnecessary.

But some objector may ask: If abstraction is banished

¹ The theory of concentric circles or concentric instruction is to be clearly distinguished from the Herbartian doctrine of concentration. According to the concentric circles, the pupil is made to study the same historical period repeatedly in successive years, going each time more deeply into the subject and mastering more details. The Herbartians devote successive years to successive historical periods, and in each year of the course *concentrate* the instruction in other lines — geography, natural history, language, etc., around the historical material as the heart of the whole course. — TRANS.

from a part of instruction, what remains of the "principle" of the formal steps? If instruction covers, strictly speaking, only the first three steps, does it not give up for the most part the determination and application of generalizations in the steps of system and method? Certainly, and it is precisely this that constitutes the second limitation, to which the universality of the formal steps is subject.

To be sure, the formation and impression of groups and series of ideas might be regarded a step of system, and going over the same in a different order (as takes place for instance in the application of orthographical series in compositions or dictations on examination) as a step of method, since there certainly exists a certain resemblance between these mental activities and the regular carrying out of the process of abstraction. And so Ziller and likewise Rein are accustomed throughout to describe as "system" a series of numbers, the drawing of the mountains of a country or the map of a battlefield, the arrangement of the matter treated in history, a series of dates, and the like,¹ which are to be treated in a more advanced grade as expressing general notions. But an historical table, a drawing, a graphic presentation of the historical matter, a geographical description, are neither expressions of general notions nor anything universally valid and necessary. They are acquired as something very individual, not by way of abstraction. But Ziller makes it an essential characteristic of the elaboration of a methodical unit according to the formal steps that the general notions and universally valid elements involved in material of instruction be appropriated by the scholar through a process of abstraction. It follows that, whenever one must be limited to the acquisition of series and groups of ideas, the steps

¹ Ziller, *Materialien*, etc., pp. 113, 125, 137. Rein, Pickel und Scheller, 5. *Schuljahr*, second edition, pp. 59, 64.

of system and method in the strict sense are out of the question; the complete carrying out of the formal steps is then impossible, provided the original notion of those steps is otherwise to be maintained. It answers fully to the psychological facts if, at the age when general notions are not to be abstracted, but only a preparation for them to be made, the elaboration of the matter of instruction be brought to a close with the many-sided union of its principal elements. Certain general characteristics, typical concepts, belong to the elements so brought into union. This course indicates, by the description of the methodic activity involved, that a perfect abstracting appropriation is not yet possible or intended.

Such a course is to be recommended moreover on one other ground. The complete carrying out of the formal steps from the lowest to the highest class is justified only when the notion of *system* is changed according to the need, that is, when we understand by the word at one time general notions and what is universally valid, at another only dispositions and material for the making of general notions. But in this way the theory appears vacillating and indefinite. The beginner adheres to Ziller's exposition of the theory according to which a process of abstraction is always to be introduced, and accordingly applies abstraction even to the material of the first school-year. How much painful artificiality, how much unchildlike reflection and precocious thinking, how many worthless combinations of concepts can be brought to pass in this manner, is not far to seek, and is unfortunately fully attested by experience. But such misunderstandings may be avoided if the idea of system be taken in only one, and that the strict original meaning of the term, if it be borne in mind that, according to Herbart, "the earlier instruction cannot give us system in the higher sense."¹

¹ *Padag. Schriften*, I., 406.

We have seen that in many cases either the material of instruction or the limited mental grasp of the scholar at the time does not admit of a deeper apperception, the derivation of universally valid and general principles; that in these cases the carrying out of a process of abstraction, such as the steps of system and method demand, will not be attempted; and that the teacher will then limit himself to securing the intelligent comprehension of the concrete facts and their combination among themselves as well as with related concepts.

But the more clearly conscious one becomes of the pre-suppositions and the limitations under which alone the application of the formal steps is allowable and useful, so much the more will one rid one's self of the notion that they are a mould in which Herbart and Ziller have attempted to mechanize the whole of instruction.¹ What do they do but give rule and order to the act of instruction in accordance with a universally recognized law of the human mind? Or is it not a fact that a thorough apperception of the material of instruction takes place only when instruction proceeds from the external or internal observation of the child, proceeds from this to abstract thought, in order, finally, to insure the right application of the results of such thought in practical exercises. Now this methodical procedure, which the nature of the human mind prescribes for us, is also the method of the formal steps. It proposes nothing more than to secure to the scholar a natural and thorough appropriation of the material of instruction. Where more or other than

¹ The most current expression which this preconception finds is the assertion that it is demanded that every recitation hour should be conducted according to the "scheme" of the formal steps. That was never, so far as we know, demanded by Ziller or Herbart, and can very seldom take place, for the reason that the thorough appropriation of a unit of instruction demands, as a rule, more than one recitation hour.

that goes on under this rubric, it is the letter and not the spirit of the formal steps that rules. But it cannot be charged against the formal steps as a fault, that the theory prescribes a definite succession in the acts of instruction, or that it does not leave it to caprice to decide which of them precedes and which follows. The freedom of caprice is rightly an object of hatred in all spheres of human knowledge and volition; should it be allowed in Pedagogy, this youngest of the sciences? Certainly not. For the rule was recognized even in earlier times for the safe guidance of the process of learning in more than one subject, as Dörpfeld has clearly shown:¹ From observation to thought, from thought to application! And every capable teacher continues to hold fast to this succession of steps. According to this it appears that Ziller erred only in proposing five steps, (strictly speaking only four!) in place of the customary three. To follow those three is right and good; but to accept five steps, and those bearing some strange names, is inconsistent with the freedom of the teacher. Such is the objection that one hears.² If such is the case the whole contention regarding the "hateful" steps runs out, as it seems to us, in the case of most opponents, into an idle strife about words. It is hardly necessary to show that the five formal steps may be easily referred back to the familiar trinity of stages of learning. When Ziller, likewise prompted by a deeper insight into the process of mental appropriation, preferred to separate the act of observation and of abstract thought into two partial steps, it was simply with the purpose of offering to the teacher as definite and practically fruitful directions as was possible for the sure carrying out of the process of apperception in the child. He was not concerned

¹ *Der didaktische Materialismus*, p. 161 ff.

² Sherfig: *Der Begriff der Bildung*, 1885, p. 56.

with setting up an entirely new teaching process, but with rounding out old established rules and rendering them more comprehensive. It was not that what was known to everyone was presented "only in slightly different words"; but rather what was old was presented in a new, that is, an improved and enlarged form. But the original conception of the act of learning as a process of apperception is a new thing in the Herbart-Ziller theory; the arrangement of recognized measures of instruction in a strictly ordered series of steps of method, answering to the course of the process of learning, is new; the introduction of analysis as a first step to the appropriation of the material of instruction is new; and finally the founding of all these pedagogic demands on a clear psychological insight is also new.

To instruct according to the formal steps means, then, to do persistently and with conscious purpose what remained otherwise given over to a happy intuition.¹

¹ It is not seldom held by experienced practical teachers, against the elaboration of the culture-material according to the formal steps, that they demand too much time and do not permit the mastering of the task assigned. We are far from entering a plea for a useless lingering upon unimportant matters, a wearisome prolixity in the introduction or the presentation of the subject, such as the spiritless imitation of the formal steps may often bring with it. We also purpose to secure to the children each hour the feeling of vigorous progress in the realm of mind. But when the over-pressure in the material for instruction assigned to each separate year of the course does not permit a thorough appropriation of the things taught, it certainly does not follow from that fact that the formal steps are unpractical. Much more is it advised in that case so to limit the things taught that they can be imparted in such manner as to mould the pupil's mind. Less would be more — that certainly holds good in the case of many of our courses of study. For in truth the teacher who advances slowly but thoroughly, goes further than one who is so anxious for the accomplishment of the task assigned that he cannot attain to a quiet, warm-hearted elaboration of the instruction-material.

"The way of Order, even if it goes a crooked course, is no side-path."
— Schiller's *Piccolomini*, I., 4.

We are at the end of our investigation. It undertook to present the evidence that all learning is, in the main, an apperception, and that, accordingly, it is the chief problem of the teacher regularly and surely to introduce the process of mental appropriation on the part of the scholar, and, as far as possible, to carry it through to the end. This demand extends, as we have seen, to nearly all spheres of instruction; it involves the weightiest principles of didactics. Those universal imperatives, for example, in which one branch of the newer pedagogy is accustomed to formulate its theory — such sayings as “from the known to the unknown,” “from the near to the remote,” “from the easy to the difficult,” — may be referred back, as far as they contain truth, to the requirement, “Provide for easy and thorough apperception”; and they are valid only to the degree in which they answer to this principle.¹ For the strong, apperceiving concepts of the child are solely and alone the known to which the unknown is to be united, the near with reference to the remote, the easy leading up to the more difficult. Whatever does not belong to these aids to apperception remains strange to the pupil, no matter how near it may be to him in time and space, or how simple and easy it may seem; it cannot, in any way, promote the appropriation of the new.

Accordingly, in seeking to derive the general didactic rules from one leading principle, and in setting forth the process of apperception as the content of the act of learning and the chief end and aim of the act of teaching, we believe

¹ Although attention has already been called from the most diverse points of view — for example, even, by Diesterweg, to the fact that these sayings have only relative value, yet they still belong to those favorite pedagogic watchwords and half-true sayings that are most frequently used — and most often misunderstood.

we are able to satisfy the demands of scientific pedagogy in a higher degree, and gain a deeper insight into the weightiest problems of method than if we set out to formulate a series of imperatives which mutually include one another and none of which can be separated in logical strictness from the other.¹ And as our theory so also can our pedagogic practice make a gain through such a peculiar conception of the problem of instruction. It is said: Every method is good which leads to the end, and the value of a process of instruction is measured simply by the knowledge and skill which the pupil is led by this means to acquire. This, however, is a false and one-sided conception. How often the outward success of a method is bought by a wholly unnecessary expenditure of time and strength; how often all pleasure and joy in the subject of instruction is quite driven away from the child by a tedious process of teaching! Such a "good" method, on which all his life long the scholar will look back only with discomfort, reaches the desired end only in appearance, while in reality it leads the pupil far astray; for it robs him of living interest, that indispensable condition of further effort, without which any real, lasting success of instruction is out of the question. So the important thing is not exclusively *that* something be appropriated, but *how* the appropriation takes place. Not every way that

¹ Compare, for example, the following nine principles of instruction, as Lindner (*Allgemeine Unterrichtslehre*, sixth edition, pp. 82-101) lays them down side by side: Instruct naturally, psychologically, through observation, in a manner to be easily comprehended, formatively, attractively, for lasting results, practically, and in the instruction lead the scholar on to self-activity. *Die Schulerziehungslehre* of Schwarz and Curtmann in the eighth edition, edited by Freienselmer, even brings the number of such general principles of instruction up to twenty-four. Here one seeks in vain for the logical ground of division, the distinguishing characteristics, by which the ideas named may be clearly and sharply separated from one another.

leads to the desired end is expedient, but only that one which attains the end by the easiest way, and that most suited to the nature of the scholar. Now, such an easy, level way we believe we have described in these pages. We indicated above how much apperception unloads the mind, and how much strength it saves the mind in consequence. In preparing with the utmost care for that process, in removing obstacles which would oppose themselves to any intimate blending of the subject and the object of the act of appropriation, in carrying out the process of apperception once begun to certain and full completion by a strictly methodical treatment of each unit of instruction, we undoubtedly aid essentially in rendering the act of learning less difficult. We protect the individuality of the pupil in so far as we allow him by the aid of his own familiar concepts to comprehend what is new and unfamiliar. We promote his self-activity as often as we allow him to attain the proposed end either wholly or in part by ways of his own choosing; we heighten the joy of learning by enlisting his own inmost thoughts and feelings in the instruction, and so insure the many-sided application of what is taught. We will not make apperception easy in the sense employed by the philanthropinists; we do not advocate a kind of learning that is all play. Work itself becomes pleasure to the pupil as soon as he becomes acquainted with the aids to the mastery of new knowledge which slumber within him. But on this delight of learning we set the highest value; for it conceals in itself the germ of true interest. What comes easy to the pupil, at the same time increasing his strength — that wins his heart, and continues for a long time, perhaps to the end of life, to be an object of his liveliest desire. Such delight “is the heaven under which everything flourishes — except poison.”

And we strive after one thing more. When we, from principle, offer the pupil nothing new in instruction without having first called up old, familiar concepts within him, when we seek in the steps of association and application to establish a many-sided and intimate connection of what has been newly learned with the other spheres of thought, we plainly prevent the isolation and division of the separate thoughts and promote the formation of rich, well-united concept groups. But the richer a group is, the more frequently it offers occasion for calling it back into consciousness, and the more frequently it is repeated, the greater becomes the ease with which it returns. Further, in insisting on presenting the matter of instruction divided into sections of snitable length, and the regular alternation of learning and thinking, in prompting the pupil to rise from numerous particular concepts by means of comparison and abstraction to general notions, and with the help of these to master the concrete material of experience, we provide for the logical articulation and elaboration of the branches of his knowledge. But the richer, better articulated, and more easily reproduced a concept group is, the greater is its power and the influence which it exercises on other groups, the better suited it appears to be to act in its turn as an apperceiving mass on new incoming concepts. So as the thought material is acquired, for the most part, by the way of apperception, it serves again at the same time to introduce new processes of assimilation; the product of apperception becomes a means of apperception. But this aptitude of the concepts and general notions for apperception is the best gift that the school can confer on the pupil for the journey through life. The problem of the school is not to be sought for in making the pupil ready for life, so that he should have nothing further to learn; it can-

not do that. Much rather can and will instruction prepare the scholar only to find his way with the help of what he has learned in the domains of knowledge, feeling, and volition, and to appropriate the new things which the school of life gives him to learn through old, familiar acquirements. If the pupil succeeds in this; if he presses boldly on in the path of knowledge; if his æsthetic ideals, his religious principles, and ethical maxims prove so strong and lively that even under the most difficult circumstances he knows how to distinguish the beautiful from the common and ugly, the divine from the ungodly, the morally good from the bad, and even in complicated cases to find the right, then instruction has accomplished enough, and fairly contributed its part in the service of education to the formation of a morally vigorous character.

PART III.

HISTORY OF THE IDEA OF APPERCEPTION.

The idea of apperception is not a result of modern psychology; it is no artificial expression invented for the purpose of giving well known pedagogical truisms a new, learned, philosophic garment. Far from it: it has a history of its own. A look into its historical development will not only dispel that prejudice, but essentially aid in the comprehension of the theory of apperception.

A. The Idea of Apperception with Leibnitz.

The first who applied the idea of apperception in philosophy was Leibnitz. He arrived at it in his investigation of the nature and chief activities of the human soul. The latter is to him a simple, indivisible substance (monad), whose life consists chiefly in continual change or transition from one perception to another. These perceptions, or inner conditions, it is true, reflect the outer world with its occurrences, but they are caused by these neither directly nor indirectly; on the contrary, they are created freely and independently by the soul, according to its "inner principle" and from its own stores. They correspond, however, without exception to those outer occurrences because the omniscient God has previously so arranged the order of the

discursive conceptions and once for all so established them, that they are always in harmony with things external (Pre-established Harmony). Hence if the soul produces perceptions every moment, it does not follow that it has conceptions always equally valuable, that is, equally strong and distinct. There are innumerable perceptions of which we do not become conscious, because these impressions are either too insignificant, or too numerous, or even too uninform. (We do not pay further attention for instance to the movements of a mill or a waterfall, if by habit they have become commonplace.) They are on the same level with perceptions formed during swoon, dizziness, stupor or dreamless sleep. These weak perceptions (whose efficacy must not be underrated, since all actions performed without deliberation, as well as habits and passions, depend upon them) lack distinct consciousness and remembrance. So long as we do not rise above them, our souls do not perceptibly differ from those simple monads that have only perceptions — like the plants and lower animals.

But man has also stronger ideas, he produces perceptions of which he is distinctly conscious and which therefore are indelibly imprinted upon his memory. They may be designated in contradistinction to the weak perceptions as sensations (Leibnitz : “*sentiments*”) or apperceptions. They are the results of strong impressions, or of combination and accumulation of numerous weak perceptions which in themselves were not apperceived. For of all our perceptions, even of the weak ones, none are lost, and the distinct ones arise gradually from perceptions too indistinct to be noticed. Every distinct idea comprises an infinite number of confused perceptions. These distinct perceptions coupled with memory do not belong to man exclusively; the animal has them too, hence it is credited, like ourselves, with having a soul.

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Man alone is able to reach a higher stage in the activity of conceiving, the step of reflexive cognition; at this stage he not only grasps things external, by means of more perfect perceptions, but he also comprehends their inner connection, "*connaissance des causes*"; he recognizes and understands necessary and eternal truths, as we find them recorded in science, the divine plan according to which all things are arranged. And finally, while directing his attention to occurrences taking place in his own soul, he rises to a recognition of his own self, to a conception of his *ego*, to self-consciousness. This conscious grasp of the content of thought Leibnitz designates in his later works by the term APPERCEPTION in contradistinction to mere perception. It is the characteristic of rational souls or minds — (*esprits*).

From the foregoing it is seen that with Leibnitz the idea of apperception is inconstant. First, he gives it the significance of consciousness, or conscious distinct conceiving, following the common usage of language according to which "*apercevoir*" = to perceive, "*s'apercevoir*" = to observe, or notice. Then again, he defines it as "*la connaissance reflexive*," a thinking, grasping of the contents of a conception caused by arbitrary attention, the reflective cognition of our inner states. It cannot be said that the one definition belongs exclusively to a former, the other to a later, period of his activity as an author. For although in his "*Monadology*" and his "*Principles of Nature*," the second definition is much more prominent, allusions to the former definition are by no means wanting, while on the other hand in his "*New Essays*" some remarks prepare the way for his later definition of the idea.

While thus the philosopher's view concerning the true essence of apperception is left obscure, no doubt can be entertained about one important characteristic. According

to Leibnitz the soul creates its conceptions not only out of itself and by its own means, but also independently of external inducement or motive. Hence to apperception as a kind of conceiving may be assigned the characteristic of absolute spontaneity. This follows necessarily from his supposition of a pre-established harmony. However, in this Leibnitz did not consistently adhere to his original view. If the soul reflects the universe like a living mirror according to its level and point of view, if it be purely passive in perceiving, and if its acts of cognition are at least partly dependent upon the senses, in other words, dependent upon the nature of things external as well as upon the essence of the mind, then absolute spontaneity of its action of conceiving cannot be said to be in harmony with it. If we further consider that distinct ideas according to Leibnitz arise gradually from weaker ones, and that they, generally speaking, are called forth and created with the aid of preceding conditions in the soul, it follows that the activity of apperception is, to a certain degree, dependent on the contents of the soul already present. It takes place under the determining influence of those contents. Hence Leibnitz's views concerning apperception may be grouped as follows :

(1.) By apperception we understand distinct, conscious conception coupled with remembrance, as well as thinking, reflexive comprehension of the contents of our own mental states, in fact, inner perception, or self-observation.

(2). It exerts itself as spontaneous activity, dependent, however, upon the determining influence of the existing contents of the soul.

The first of these two thoughts seems to have found general recognition even with philosophers who did not share his hypothesis of a pre-established harmony. Thus, for

instance, Christian Wolf (1678-1754) designated perception as observing an object, and apperception as becoming conscious of a perception. And Herder says, "all sensations that rise to a certain distinctness become apperception, thought; the soul knows that it perceives."

On the other hand, the spontaneity of apperception has been adhered to by Kant; he emphasizes it as an essential characteristic of the idea. His theory of apperception, which occupies a prominent position in his system of philosophic criticism, may now enlist our attention.

B. Kant's Theory of Apperception.

In his memorable work "Critique of Pure Reason" (1781), Kant places at the beginning of his investigations the question, "What are the sources of all human knowledge?" He finds that at first the senses (outer and inner), by virtue of their receptivity for outer impressions derived from things, and from inner experiences of the emotions, offer the raw, formless material of cognitions. These, in themselves confused impressions and percepts are, with the aid of imagination, arranged by being fitted into forms of space and time already existing in the soul; thus they are raised to sense-perceptions (*Anschauungen*). But, in order that these may obtain the significance of objects, certain inborn, pure notions of the understanding are added, with which all sense-perceptions must agree, to form an inner connection between them. The perception and cognition of experiences acquired by means of sense-perceptions, through the pure notions of understanding, constitute, really, a judging, a connecting of different pictures according to their contents, a combining of the (given) manifold in our cognition, a synthesis. The unity of this manifold is accomplished in thought in what he calls the *categories*. (Thus, for instance, we think the

percepts of lightning and thunder necessarily together in the idea of cause and effect, causality being regarded as a category of the mind.) What these pure notions of the understanding are, that is, independent of all experience and free of all emotions, is seen from the functions of the active mind. There are as many pure notions of the understanding, or categories, as there are kinds of judgments. Kant's table of categories, which places them under the higher units of quantity, quality, relation and modality, offers a complete list (See Watson's *Selections from Kant*, pp. 51-2).

Hence, there are two sources of human knowledge: experience, which offers the material of sense-perception or percepts, and our self-active mind, which forms it into cognitions or ideas. Two faculties correspond with these sources: the faculty to receive sensations or percepts (receptivity of the senses), and the faculty to call forth ideas or concepts (spontaneity of the understanding). Hence the outer and inner experiences are not the only sources of cognition, as Locke thought; but previous to all impressions are, *a priori*, the pure conceptions of space and time, as well as the pure notions of the understanding, which we add to the experiences as something inborn, or native, to the mind.

However, this presentation meets formidable difficulties. According to Kant, the categories perform the labor of connecting manifold phenomena into cognitions, thus, and only thus, making experiences possible. But if these notions of the understanding, *a priori*, exist previous to, and outside of all experience, if they are not created by it, and have nothing in common with it—how can they refer to it, and how can we say that they first make experience possible? The answer is: all cognition rests, as we saw, upon the connection of the manifold into a necessary unity,

that is to say, upon synthesis. The connection of the manifold can never occur through the senses, and can, therefore, not be contained in the pure form of sense-perception. Experience, it is true, tells us that two perceptions (like thunder and lightning) are acquired at the same time, but that they should necessarily be thought as belonging together, it does not teach. Hence, synthesis is not given in the object of perception, but as accomplished by its subject; it is the action of a spontaneous power of conceiving, *i. e.*, of the understanding. The pure notions of the understanding are, therefore, necessarily to be added to impressions or perceptions from the outer world, because only with their aid is synthesis, that is, cognition, possible.

But what is the final reason why the understanding recognizes in a judgment the unity of different notions? Why should I be obliged to think the manifold in experience necessary, for instance, in the relation of cause and effect? What makes possible and effects the connection of representations (ideas) according to the categories? It is a fact, that all manifold of sense-perception has a necessary relation to the "I think" in the same subject in which this manifold is found. The manifold elements contained in one concept, I recognize wholly as mine. They are so, however, because they belong to one and the same self-consciousness. In so far as they all belong to one unchangeable ego, they constitute one idea. But herein lie the reason and the possibility of their necessary combination. Because I combine them in one self-consciousness, I recognize their inner connection, and I am conscious *a priori* of their unity, or their necessary synthesis. The relation of our concepts to one and the same ego, or self-consciousness (which is expressed in this, that the "I think" accompanies, or may accompany all my ideas and concepts), makes possible *a priori* all synthesis,

all thinking cognition of experience. However, we are not coerced by our experience, that is, by the matter of our impressions (percepts) to this reflexive connection; on the contrary, it is an act of spontaneity, that is, of the soul's activity, wholly self-dependent, and independent of exterior influences.

Spontaneous activity, then, which combines in self-consciousness the various impressions and ideas offered through the senses, is called "APPERCEPTION"¹ by Kant. It is also expressed as self-consciousness.

Indeed, apperception, as characterized in the foregoing, is pure, original, transcendental; that is, it is that self-consciousness which accompanies, or may accompany, our ideas with "I think." It is designated as original, because it exists before all experience; as pure and transcendental, because as spontaneous activity it does not depend upon the matter of our perceptions. Their unity is founded in this, that man recognizes all his ideas as his, that is, belonging to one and the same unchangeable subject (the pure ego). Hence unity of original apperception is synonymous with consciousness of the synthesis of ideas or their elements. The understanding is nothing else than the faculty to combine *a priori*, and to bring the manifold of given ideas under the unity of apperception.

From this, the fundamental importance of pure apperception for Kant's theory of cognition becomes plain. If the unity of different ideas is recognized in their relation to self-consciousness, that is, through the unity of apperception, the latter is the requisite of all judgment, of all cognitions. It not only connects ideas, but gives this connection the characteristic of necessity.

¹ See Watson's Selections from Kant, p. 65.

Its pre-supposition is, as we saw, the notion of the pure ego, that self-consciousness which, according to Kant, does not develop gradually by means of and along with experience from without, but precedes it from the beginning, and accompanies all of our ideas. He calls it the transcendental self-consciousness which lies beyond all outer experience, because the unity of original apperception tells us nothing about the nature of the pure ego.

But, besides this transcendental, there is also an empirical self-consciousness; besides the pure ego, an empirical ego to which also we refer our ideas. This latter, however, changes its content in the course of human life quite often, and is, on account of its changeableness, not able to produce an abiding identical self. In consequence of this, the relation of the concepts to the empirical consciousness, or the empirical apperception, cannot effect truly correct cognitions. It chiefly obeys the laws of association and hence forms only accidental, not necessary combinations of ideas.

When a child, for instance, notices lightning and thunder as phenomena, one of which follows the other in time, without knowing the relation of cause and effect, it performs an act of empirical apperception.

All differing empirical consciousness must, in order that I may attribute it to myself, be connected in a single self-consciousness. Hence all empirical consciousness has a necessary relation to a transcendental consciousness, namely, that of myself as the original apperception. Hence, also, the empirical apperception pre-supposes the other, and is derived from it.

It is plain then, that Kant's idea of apperception unites all the characteristics which we found in Leibnitz's theory:—The logical connection of ideas, the thinking of general and necessary truths, the reflexive comprehension of our inner

processes, their relation to our ego called forth by spontaneous activity of the soul. But that which with Leibnitz was only hinted obscurely is here expressed very clearly. What were there considered parallel expressions of one and the same activity, are here combined to a strict logical unity. The thinking of necessary truths is not a form of apperception differing from others, as, for instance, observation or perception, or relation of our concepts to self-consciousness, but it is the sequence of the latter. The idea of the pure ego is not considered the possible result, but the necessary presupposition of apperception. In this is found at the same time the chief difference between Kant's and Leibnitz's ideas. Leibnitz considers apperception the fruit of an extensive development of the soul. As distinct ideas are formed from unconscious impressions or perceptions, so from a combination of strong ideas apperception will arise, and the self-consciousness thus gained lifts the soul to a rational being or spirit. Kant does not recognize such a development of our mental life. According to him, the pure ego, or self-consciousness, is the original possession of the soul and the transcendental apperception is that activity of the understanding which proves active from the very beginning in perceiving and representing or conceiving objects. The ability to apperceive in this sense is not acquired gradually by mental labor, nor is it founded upon well-arranged contents of the soul, but is given previous to all experience from the outer world; it alone makes possible the higher activities of the mind, thinking and cognition.

C. The Idea of Apperception with Herbart.

Herbart undertook a development of the theory of apperception in an essentially different direction. He, too, started from certain thoughts of Leibnitz. While Leibnitz thought

apperception to be a result of mental building-up of many weak perceptions into ideas, Herbart asks, in what manner weak impressions or ideas can be raised to a higher degree of consciousness. He consequently investigates the conditions of apperception as given in the contents of the soul already existing, in order to penetrate deeper into the nature of the process. And there he finds that ideas are apperceived (that is brought to greater lucidity) only when they themselves become objects of a new act of perceiving, when other series of ideas notice them, so to speak, and combine them with themselves. He points this out at first in the apperception of outer sensation or impressions. In other words, it takes ideas to apperceive ideas.

Every simple or complete perception (or sensation) which enters consciousness through the gates of the senses, acts upon the ideas present as a stimulus. It repels everything contrary to it that may be present in consciousness, and recalls all similar things, which now rise with all their connections. This complex perception (or sensation) invades several older groups or series simultaneously, and thus induces new conditions of fusion or arrest. While thus it causes a lively notion of the ideas, it may be compared with a light, casting its rays all around it. The stimulated mass of ideas raised simultaneously, resembles an arched vault extending in all directions from a centre. As long as this arching continues, the central perception has, by virtue of its stimulating power, the controlling influence in consciousness. But the more it checks all less similar ideas, that were called up as opposites, the more they recede, and allow older, quite similar ideas to rise, favored as they are, and gradually form the point of the arch; this becomes the more raised or pointed the longer the entire process lasts. Now when a fusion of the new perception (sensation) takes place with

those ideas reproduced anew, and standing high in consciousness, the latter assert or maintain superiority (controlling influence). For the ideas coming from within are, by virtue of their connections, stronger than the single new percept; especially since it diminishes in power after its stimulating effect is lost. The new perception must suffer, being placed in rank and file; it is made an acquisition of the older series of ideas.

The same relation, pre-supposed between sensations or percepts and older ideas, may be repeated between the weaker and stronger notions reproduced, or called up. A weaker series of ideas, one which is less deeply rooted within the entire horizon of thought, may be excited and developed in its own way in the mind. Through it a related mass of thought is called back, *i. e.*, one stronger and deeper-lying. At first the former, more excited series of ideas presses back the second series with reference to its opposing elements. This second series is thus brought to a tension and presses upward all the more powerfully. Now it shapes the first series in accordance with its own form, holding it, as it were, by its similar and fusing elements, repelling it at other points. Here we have an acquisition of ideas which may be designated, in contradistinction to outer, as inner apperception; or, better, as apperception of inner perception. This is, with Herbart, as his examples prove, almost without exception, congruent with inner perception or self-observation. For he sees one of the chief objects of apperception in this, that it enables us to notice our own inner conditions, so that affections and passions may not surprise us, or lead us to hasty actions, but empower us to make a strict moral criticism of self.

Hence it is necessary to know the conditions under which such apperception can take place securely and successfully.

Physiological checks and irritable temperament are not favorable to apperception. Perceptions which are to be apperceived must be neither too new, nor too strange; neither too weak, nor too volatile. The new percept must be met by a sufficient number of apperceiving ideas, that is, such as offer enough points of contact with the new, and are sufficiently strong, and cross the threshold of consciousness at the proper time. Above all, the apperceiving notions cannot be raw, chaotic, or only loosely connected masses, but must be well perfected series of ideas. Especially the ideas ruling them, namely, judgments and maxims, possess a strong apperceiving power. The most general ideas are called categories by Herbart. He distinguishes categories of outer apperception, which serve in the acquisition of outer observation, and categories of inner apperception, with the aid of which we understand the states of our own soul, and those of others. The former categories refer to objects of the outer world, the latter to what happens in our own consciousness. The categories of outer apperception are the well known general notions of Kant; those of the inner designate either feeling or knowledge, either volition or action. Speaking, especially conversation, exercises a prominent influence upon their development and application. In conversation we are occupied with what is absent and past, not with observation or perception, but with ideas (the residuum or resultant of observations). The burden of immediate, sensuous presence is thereby removed, a burden which oppresses the animal continually. Conversation induces man to preserve inner states in his memory longer and to recall them oftener by occupying the mind with things past and absent. A consequence of this is, that the older ideas can enter into new combinations; and it is through these combinations that they are turned into very much stronger powers. Speaking

is labor. The entire thought to be expressed must constantly hover before the speaker, and apperceive to the speaker the different words with which the thought is to be clothed before they are uttered. When the speech is ended, the same happens with the series of words or sentences:—It is caught up, as it were, and apperceived by that mass of ideas to which it corresponds. Thus through conversation arises a systematic combination and fusion of notions to ruling ideas, which, as categories, act apperceivingly upon the objects of experience. The categories of inner apperception especially enable man to observe and distinguish what takes place in himself or others. While thus they bring about a consciousness of the inner world, they contribute essentially to the development of a purer and more distinct concept of the ego.

It is Herbart's merit to have defined the various processes in the act of apperceiving, and thus to have given the idea of apperception a greater distinctness. The supposition of Leibnitz, that apperception might be dependent upon conditions of the soul already existing, had not been noticed further by Kant; since the subject of transcendental apperception, the pure ego, was to be taken as the emptiest of all concepts, the empirical contents of the soul were not considered sufficiently in his theory. As Herbart took up again that thought of Leibnitz and searched for the conditions of apperception, he recognized and emphasized, first, the importance of that residue of ideas acquired in the course of life, that is, its importance for the acquisition of new impressions and experiences. Since Herbart's investigation, it is taken for a fact, that our outer and inner perceptions, without exception, take place with the assistance of older related ideas, the contents of which are determinative for the new perception. With that, the definition of apperception as a resultant of

gradual development of the mind is given. For if apperception is absolutely dependent upon the nature of the store of ideas acquired; if man apperceives correctly or incorrectly, superficially or thoroughly, in harmony with the contents and order of the series of ideas dominating his mind, the strength and the extent of his apperception grow with the increase and perfection of those groups of thought. It is entirely out of the question to consider spontaneous activity of the mind, *i. e.*, actions independent of empirical contents and not being capable of development. Herbart refutes such an assumption directly: "Apperception, or inner perception, takes place only when the conditions allow it. There is no room whatever for the lawless play of transcendental freedom."

However, in his polemic against the supposition of an inborn faculty of apperception, he seems to overlook that the process of mental acquisition does not only set combinations of ideas into motion, but that to its successful termination certain emotional conditions and acts of volition must contribute. When, for instance, he speaks of ascending apperceived ideas as being guided or checked in their motions by more powerful masses of thought, it would seem more reasonable to attribute to volition this interference with the series of concepts. In active apperception, awakened by definite feelings that are coupled with the contents of concepts, volition calls up assistance which, without it, might come too late; it accelerates the arching and pointing of the thought by narrowing the circle of ideas that have been preserved in consciousness. Without activity of emotion and volition no strong apperception seems to take place — a fact which may have given rise to the appearance of complete spontaneity of the process in the sense of Kant.

Herbart's assertion, that apperception conforms exclusively to older concepts which are superior in strength to the new

one, has found opposition. Especially is it Staude,¹ who points out the precarious consequences of so narrow a view. It certainly was not Herbart who underrated the formative influences which at times, and under certain circumstances, a new perception may exercise upon older apperceiving groups of thought. When, for instance, he says that certain perceptions could cause a decomposition and new formation of ideas, or a correction of firmly rooted combinations of ideas; when he emphasizes the importance of conversation for the systematic connection and solidification of ideas through apperception, we may take this as evidence of his not underrating the importance of the apperceived ideas. This somewhat narrow definition of the law of apperception seems to have its foundation in the confusion of two ideas. Herbart, as a rule, does not distinguish, as we have seen, the apperception of inner perception from self-observation (the inner sense). Such a confusion is the result of the double significance which has always been attributed to the idea of inner perception. We understand by that, as is well known, objective representation of absent things or events by the aid of reproductive imagination, as well as perception of inner

¹ He says: "If this law alone were determinative, every human being would have acquired a finished and perfect development, and the question, how he arrived at this degree of perfection, would remain unanswered. For everything that may be offered to his soul by inner or outer perception would simply be fitted into the contents of the soul already existing, and become organically connected with it in that changed form, without being able to do more than merely strengthen these contents. But the intellectual education of man consists only to a small extent in confirming the finished contents of the soul already existing, and much more in providing it with new cognitions. Hence, in order to facilitate a real progress in man, the younger percept must, abandoning its exclusively passive rôle, be able to act upon the older ones; and, at times an entirely (?) new concept must be able to spring up in the soul which previously could be found neither over nor under the threshold of consciousness" (Wundt's *Philos. Studien*, p. 166).

conditions, *i. e.*, self-observation. There, it is becoming conscious of the thing perceived; here, of the act of perceiving: there, it is a perceiving of facts of outer and inner experience; here, it is a perceiving of purely inner states. The activity of the one kind of inner perception can change to that of the other kind without difficulty. As Herbart directed his attention to the apperception of inner perception, that is, the acquisition of reproduced ideas, he seems to have been led unconsciously to the related theme of self-observation by the empirical material offered. His examples of inner apperception have almost all reference to cases in which one's inner conditions or actions, affections, passions, outer conduct, etc., are subjected to self-judgment. A man examines an idea with regard to its value, recognizes and governs himself in his affections, and measures his actions by the standard of his maxims; while a child having no principles, or a poet in the condition of enthusiasm, cannot apperceive his thoughts and actions. In cases of mental acquisition, it is true, apperception and self-observation are always intertwined, since man through ethical ideas and judgments apperceives ideas which concern his own volition and action. Hence the erroneous supposition lies near, that things which are given simultaneously must also belong together logically, *i. e.*, that self-observation accompanies apperception not only in some cases, but always. But self-observation presupposes a strong superior mass of thought which comes to meet the new perception in order to assimilate it. From this Herbart derived the general fact, that inner apperception conforms to older, deeply-rooted concepts. He never asserted the same of outer apperception, and certainly never intended to do so.

Though after what has been said, it is clear that Herbart's theory of apperception needs correction and completion in

several points, on the other hand there can be no doubt that it is very well capable of such correction and perfection. A stronger emphasis upon the acts of emotion and volition in the process of apperception and their relation to the ego, for instance, might as little contradict its essence as a sharper distinction between the idea of intentional inner observation and that of apperception would. That which distinguishes advantageously Herbart's view from the views of Leibnitz and Kant, is its far-reaching applicability and practical importance in the field of empirical facts. More than one chapter of psychology has found a much desired lucidity through it; namely, not only the lower processes of cognition "as they take place in common life," but also the higher mental activities are made clear by means of Herbart's views of apperception.

Most psychologists of the Herbartian school have treated the problem of apperception in a similar manner. We mention only Drobisch, Schilling, Volkmann, Strümpell, Zimmermann, Lindner, Drbal. To Volkmann belongs the merit of having been the first who strictly separated the ideas of apperception and self-observation. The idea of apperception has since Herbart found the most fruitful application in pedagogics through Ziller. His explanation of "acquisitive attention" casts a brighter light over the conditions and course of the process of learning, and over didactic maxims resulting therefrom.

A further development of Herbart's theory of apperception has been attempted by Lazarus and Steinthal, particularly from the standpoint of the philosophy of language.

D. The Idea of Apperception with Lazarus.

As in every material or mental activity, so in the process of apperception, two processes must be distinguished: that

of action and that of reaction. Every reaction is determined on the one side by the nature of the action upon which it reacts ; on the other side by nature itself, that is, by the original or acquired nature of the reacting being. Thus every perception must be dependent upon the nature of the stimulating object, and upon the nature of the soul as a perceiving being. But the soul may react, yielding a sense-impression in two ways : first, according to (by virtue of) its original nature, then according to (by virtue of) the nature acquired by its previous activity. In the former case the result is a perception ; in the latter, an apperception. Both are always found together in the process of perceiving ; they may be distinguished as to content, but not as to time. Every perception is also an apperception, that is, a reaction of the soul, filled, more or less, with the contents of former processes. The soul, as a sentient being, perceives according to its original nature, while at the same time it apperceives according to the elements acquired through earlier actions. An apperception is not added to complete a perception, but perception is formed under the assisting and essentially determining influence of apperception.

Hence, we complete, correct and sharpen the sensations, and add, in perceiving outer objects, by means of apperception, what is not given through the senses. In delusions of the senses and in illusions we meet the secret activity of apperception.

But apperception is of particular importance for the linguistic development of the individual as well as of entire nations. The creation of language took place with the continual assistance of apperception. At the beginning, man was without language, subject to the irritating impressions of the outer world, responding to them only with emotions. But the reactions of his soul against the sensual

impressions, especially when excitation of his feelings was coupled with them, increased to reflex-movements, that is, to sounds, which, then, were expressions of sense-perceptions that gave rise to emotions. In this process of sound-generation is expressed a tendency to equalize the force of impression by expression; to relieve, as it were, the soul as well as the organism of the mass of impressions received. The sound expressed in consequence of an outer impression was perceived internally and united with the idea of the object perceived into a complex formation; that is, into a unity of impression and expression. When a sound created by the same man, or other men, repeatedly returned, it was understood and interpreted, that is to say, it awakened with the aid of a reproduction of sound a representation of the thing; the sound became a linguistic utterance; perception became apperception.

Thus it happened that in the first or pathognomonic step of linguistic development with interjections or exclamations of emotion; thus also in the second or onomato-poetic (name-creating) step with expressions of sound-imitation, that which man himself had put into these sounds at their creation, he now hears again and, apperceiving, recognizes.

More clearly than in the creation of this so-called outer form of language is noticeable the activity of the acquired contents of the soul in another kind of language formation. When, for instance, the Greeks and Romans designated the ox (Rind) "*βοῦς*," *bos*, they evidently meant to say "the boo-making" animal; that is, they saw the whole animal in this single quality, in the tone of its voice. Among all the different kinds of sense-perception which combined to create the idea of that animal, this one is most prominent; its name therefore was transferred to the entire concept. Thus it came about that a word designates the whole thing, whose

name in reality expresses only one quality. Whenever the concept *ox* was connected with that word, apperception of a new sensation through an older, linguistically fixed one, took place. This one-sided relation to man of a many-sided object fixed by language, Lazarus calls the inner form of language. This inner form of language made itself felt most strongly in the third step of language formation, which may be called the characterizing step. At this step no new elements of language (word-roots and root-words) were generated, but men endeavored to make new forms with the store of words obtained, and to fit all new perceptions into older related groups and forms. Here the apperceiving strength of the existing store of language proved most effective and fruitful. In the same way in which, formerly, in entire nations the creation of language proceeded, the individual of to-day has to proceed in learning a language. Even the child of to-day has to create language like man in prehistoric ages, self-actively, according to the laws of apperception.

The course of apperception naturally is dependent upon the nature of apperceived or apperceiving ideas and those accompanying them. The subject of apperception, especially, may consist of separate, simple, or complex ideas, as well as of forms of thought and contents of thought. The latter arise through solidification of concepts; as, for instance, when the essential characteristics of numerous related objects are combined into one idea; or the contents of an essay into a logical outline; or the separate features, events and actions of a historical person in a brief but complete characterization. Ideas and laws, methods of thinking and working, maxims of action, rules of art, are, so to speak, the psychical organs, through which the individual thing that has reference to them is apperceived.

However, they act not only through their contents, but just as much through the accompanying conditions of the soul. Not only that takes hold of a new impression which, in a moment of mental acquisition, fills consciousness, but there are also unconscious elements active in the process of apperception which, with the contents of consciousness, form one group or series. This happens especially where, instead of the contents of a group of thoughts, only an idea representing it acts apperceivingly in consciousness. In the act of thinking, in art work, or inventing, the conscious action of the mind is constantly assisted and determined by reverberating unconscious ideas. Indeed, to the latter may even be credited the real creation, the thinking, finding, establishing. Only the intention of creating and the resolution to do so, on the one side, and the complete success on the other, become distinct in consciousness. The real process of apperception, or the creation of the new formations takes place unconsciously.

Finally it must be remembered that, both for form and course of apperception, the feelings and tendencies which move the soul are of importance. Our wishes and cares, our affections and needs, our longings and desires, guide and determine our perception of things and events. In the grandest creations of the human mind, the soul's mood proves to be the most influential force for the direction and order of apperception.

The idea of apperception has experienced an essential addition through Lazarus. With Herbart it was confined chiefly to such cases in which the acquisition of the new is preceded by excitation of the circle of thought, that is, a contemplative, lingering observation, an arching and pointing of concepts; but more exact investigation showed that apperception can take place even without such intentional

guidance of the movements of ideas. Not only in the moment of continuous reflection and profound thought, but also in the seemingly simplest processes of intellectual life, we are apperceivingly active. Hence, generally speaking, apperception may be considered as a reaction of the soul (filled with contents) against outer and inner perception.

In emphatically calling attention to the importance of unconscious ideas, as well as to that of feelings and affections, words and volition, for the process of apperception, Lazarus offers a valuable addition to Herbart's view. For the forces that, in the act of apperceiving, awaken and guide the masses of ideas are the secret powers of the emotional soul (*Gemüth*); to understand them means to recognize the deepest motives and causes of apperception.

E. The Idea of Apperception with Steinthal.

Every perception is a process performed between two psychical factors or elements. That which is first given is the primary stimulation of the mind, a weak, imperfect product, caused by sense-action; a product in which subjective and objective things are not yet separated, and which gives no cognition of the exterior object that caused the excitation. Hence it cannot be said to be either a sensation or a perception. A second more important element is combined with it, namely, a memory-image of the same, or a similar object of observation. This aids in interpreting and understanding the primary action of the soul, by being fused with it. An idea, or a group of ideas already in possession of the mind, apperceives the new impression. From the combination of both arises a product of cognition, perception.

It is not the apperceptive group of ideas that brings a perception to consciousness, for either may, or may not, have the favor of consciousness. Apperception is not added to a

perception, but the latter is the product of the former; it is that which is perceived.

As in the origin of the simplest perceptions, so in the formation and repetition of complex ideas, concepts and notions, and in the creation of the most ingenious idea, — apperception is active. In every case, however, it is the moving of two masses of perceptions toward each other for the purpose of generating a cognition; it is the essence of spiritual processes upon which cognition is invariably based. It is supported invariably by elementary psychical processes; but it includes them in special combinations. For instance, we have seen that it depends upon fusion; but the latter idea does not by any means contain all the characteristics which we find in the idea of apperception. If, for instance, we recognize a beloved person, the sense-impression is apperceived by a long chain of ideas, feelings and desires arising in the memory. It is thereby perfected and formed into a definite object. Recognition does not merely mean to be conscious that the person present is the one known or loved by us, but the entire condition of our mind at the moment of seeing the person again after a long absence is what we coldly call “recognition.” It is not a theoretical act, not merely cognition, which we exercise, but an action of life, a function of our being. Such apperception shows us that we are incapable of defining exactly in every case all the factors active in the process of apperception; hence it follows, that to a certain degree the definition of apperception must forever remain obscure.

Of the masses of ideas which, for the purpose of generating cognitions, move toward each other, the one may be called the subject, the other the object of apperception. A glance at the psychological relation existing between them may make the distinction clearer.

In most cases the subject of apperception consists of older ideas already existing, that is, the soul brings to the process of apperception an "*a priori*" element, which, as the active and more powerful agent, determines the direction and success of the entire process. But what gives it this superiority over the newly acquired perception? It is its strong sensibility, the faculty of returning to consciousness easily, and forming new connections with other ideas. Such sensibility and mobility are, as a rule, qualities of rich, well-articulated groups that are reproduced regularly, series of concepts which, for instance, refer to one's profession, one's mode of life, one's every-day occupation. Every person has one or more such groups that exercise an especially strong power of apperception and which, therefore, are called the "ruling ideas."

However, their efficiency is not exclusive: we apperceive often enough with weaker or even with the weakest ideas, if they are most congruent with the impression received. We may therefore say in general: That group always apperceives which, either absolutely or only for the special case, proves the most powerful. A chief condition of the relative power of the ideas is interest, that is, the readiness of a group of ideas for apperceiving activity, which readiness depends upon the pleasure, felt or expected, in the application of its power. Interest awakens attention, that is, willingness causes readiness for mental acquisition. But it should not be left unnoticed that unconscious, sympathetic ideas, as well as moods which govern the mind at the moment, may aid a group of ideas in its apperceiving power.

If thus in general the "*a priori*" element is felt to be the stronger in apperception, in certain cases it may be that a new impression itself transforms and enriches our apper-

ceiving groups during the process of apperception. Hence, under certain conditions the object of apperception may be the more powerful element which determines both direction and result of mental acquisition.

Like the psychological relation of the two factors, so the logical relation may be reviewed. The following kinds of apperception may be distinguished.

1. If object and subject of apperception are perfectly alike, that is, if the impression corresponds to a picture in the memory, both will be fused, not only with reference to the cognition, but also with reference to the conditions of the mind under which the process takes place. This is identifying apperception.

2. While at times individual things are apperceived by individual ideas, at other times the individual is acquired by the general, the idea of a single being by the idea of the species, the idea of the species by the class, order, and so on. This classifying or subsuming apperception embraces all classifying and arranging, all proving and inferring, all æsthetic and ethical judgment.

3. Often a definite fact may be classified among certain ideas when one is incapable of harmonizing it with related groups of thoughts that are the seat of lively emotions and desires. When, for instance, a person dies whom we have loved, we understand the event well enough; but we cannot reconcile ourselves with it, cannot bring it into harmony with the condition of the soul; that is, we cannot apperceive it. When at last an adjustment takes place between the opposing groups of ideas, it is not a case of subordination or superiority, but a case of co-ordination of ideas, that is, the proper relation is found between co-ordinate ideas or such as belong to different classes. This is the object of harmonizing apperception.

4. The creative or formative apperception, finally, is found in all those combinations on which the progress of science is based, in the creations of our poets and artists, in the thinking process of induction and deduction, in the guessing of riddles, but also in illusions and hallucinations. There is one circumstance which is peculiarly its own, namely, that in every case it first creates the apperceiving factor.

Steinthal, like Lazarus, endeavored to give the idea of apperception a new setting. But while placing all activity of the discerning soul under the spacious roof of his formula, he includes psychological processes in it which ought not to be placed at par with the peculiar action of mental acquisition, although they, like apperception, serve in effecting cognition. On the other hand, one misses in his definition certain characteristics which he himself attributes to apperception as essentials: namely, that apperception is more than a mere fusion of ideas with ideas or of percepts with concepts, and that in the motion of masses of ideas lively emotions and affections participate, are not stated in the definition; it leaves us also in the dark as to how the masses of ideas moving to meet each other go about generating cognition. Evidently, then, the widening of the idea of apperception has injured its distinctness and clearness.

F. Apperception Defined by Modern Non-Herbartian Psychologists.

In the works of modern psychologists outside the Herbartian school we meet the term "apperception" but rarely. But the process designated by the term is not unknown to them. Following Herbart, almost unanimously they take it to be a fusion of similar ideas. Thus Bencke's "traces" are what remain of psychical processes that

have vanished from consciousness, and these traces serve in securing the acquisition of new perceptions.

In a similar manner Theo. Waitz speaks of "residua," remainders, or after-effects, of perceptions in the mind, "by which all subsequent conditions of the mind are modified." In earliest childhood it is, as he thinks, a general feeling, that is, "a confused mass caused by simultaneousness of different impressions, which apperceives all separate specific sense impressions." In later years "no pure and isolated perception can take place, because the mind is always preoccupied by a great number of remainders of previous processes," with which the new perception has "to make terms."

Dittes defines apperception as a sense-action or perception, which arises through the addition of formations already existing in the mind to new impressions or perceptions.

Erdmann distinguishes also perception and apperception, in so far as he calls the "acquisitive perceiving" *Anschauen*, in contradistinction to mere seeing, or perceiving. That which is totally strange is only an object; this is perceived, not "*angeschaut*." In an "*Anschaung*," however, that which is objectively perceived contains contributions from the mind itself.

Imm. Herm. Fichte distinguishes three factors in the process of perception: (1) sensation, (2) distinguishing and combining of sensations, and (3) their recognition. In this last named action, by which "a single perception is put into relation to a common picture already existing, and thus recognized," we find apperception again. It is that action which fits individual percepts into related groups of concepts.

According to Lotze, there are conscious sensations the contents of which are lost in the hasty change of the mind's

states, because no definite concept of our own life comes to meet it with which it might associate, and in whose boundaries it might unalterably take its proper place. Such a sensation is a perception, in contradistinction to apperception, by means of which we become conscious of sense-action. "We apperceive those impressions which we bring into comprehensible connection with our empirical ego, and whose relation to former events, as well as their value for the further development of our personality, we feel and treasure up for subsequent remembrance." The extent and completeness which the idea of self possesses every moment in the course of our thoughts, determines the indefinite variety of degrees of perfection with which a perception is received in consciousness, *i. e.*, with which it is apperceived. "For the concept of the ego that comes to meet it is not everywhere the same; often poor and without content it combines the new impression with but few, and perhaps, indifferent features of our own being; the impression is not recognized in the intellectual value it possesses for the entirety of our life. The most significant perceptions are often lost in consequence of the condition of our temperament at the moment, while at other times their importance is instantly noticed. If this variability of perception were confined to the theoretical contents of the impressions, a later reproduction under more favorable circumstances might adjust the want in the first impression; but this variability becomes fatal, inasmuch as it is extended over resolutions and actions (*Medical Psychology*, p. 504).

From Leibnitz's thought, as we have seen, two trends have issued in the history of the idea of apperception. The view represented by Kant considers the process of apperception as the expression of an inborn spontaneous activity, while the Herbartian school emphasizes more the effects of accumu-

lated contents of the soul, acquired during the course of mental development. While the latter school of philosophers is particularly engaged in extending and applying the idea of apperception, Kant's attempt to base all apperception upon pure self-consciousness remained isolated. Only in recent years the thought of a spontaneous activity of apperception — with the omission of Kant's metaphysical presuppositions — has been taken up again and developed into an independent theory of apperception. The last chapter of our history shall be devoted to it.

G. Wundt's Theory of Apperception.

The ideas which at a given moment exist in consciousness differ with regard to their distinctness. The majority of them, less distinct, recede behind ideas, or conceiving elements, that are distinguished by special clearness. This fact has been compared with the similar phenomenon which is observed in the act of seeing. The pictures of outer objects which are formed on the retina are most distinct at the point called the focus; their clearness diminishes more and more, the farther away they are from that point. Now taking consciousness, figuratively speaking, as an inner seeing, it may be said that all concepts present at one moment are within the field of vision (*Blickfeld*) of consciousness, while only one is in the focus (*Blickpunkt*) of consciousness. The entrance of an image into the field of vision is defined as perception; its entrance into the focus of vision as apperception.

Hence, apperception is shown in the high degree of clearness acquired by a concept or image; but at the same time a definite psychical action which causes this result is necessary: namely, this — the image, being present with others in consciousness as a percept, is seized upon and brought to

greater clearness by attention. But attention is nothing else than an act of the will. For the will must be defined as a conceiving activity in consciousness, which activity in the course of our inner states acts determinatively, and calls forth corresponding outer movements. Hence, apperception is an act of volition, a determination of the will upon the ideas. No apperception without activity of the will! And it is always the one will which is expressed in all forms of apperception. "Apperception is the activity of our will in the realm of our ideas, and only in this activity do we ourselves feel the unity of our volition." Therefore Wundt thinks, with Leibnitz and Kant, that apperception is the foundation of our self-consciousness.

It is plain, then, that so fundamental a psychical function must exercise a far-reaching control in the realm of thought. Without apperception our concepts would resemble scattered members wanting a unifying element; they would be incapable of entering into association with one another. For it is an erroneous supposition that percepts and concepts are combined by means of their contents, or their inner and outer relations. That which combines them is apperception. Indeed, apperception raises them to the rank of inner functions. Apperception is felt directly as an inner activity "from which we transfer the character of inner actions upon the contents of that which is apperceived. The ideas themselves appear to us as inner actions, although we remain conscious of the fact that this character can be attributed only to their apperception." With reference to this fact Wundt calls apperception briefly "conceiving activity." It is, therefore, both an action of production (conception) and volition (since, according to Wundt, feeling is to be traced back to volition), or the sum and substance of an inner activity. So long as apperception is active in the

field of associative combinations of ideas, so long as it contributes to the formation of elementary mental structures, *i. e.*, complexions and complications, groups and series of ideas, its character as an action of volition does not appear. Here, ideas are apperceivingly combined without one's becoming conscious of the assistance of the will. Wundt attributes this to the fact that here the will is determined univocally (*eindeutig*) by perceptions entering consciousness, that is to say, one perception is so distinguished by intensity, or its emotional tone, that apperception of others is quite out of the question. Hence, we think that we are guided by outer influences, or by our reproductions and not by our will. We have here a form of apperception which we may call passive apperception.

It is different in that action of apperception which on the basis of associative combination of concepts proceeds to the formation of ideas, judgments and conclusions. This action moves chiefly in the regions of thought and imagination. Here, apperception is not guided univocally by ideas that are raised by association, but several ideas are at its disposal among which it can choose. And "it chooses the proper ones by means of an activity which is determined causally by the entire historical development of consciousness." In this action we become distinctly conscious of apperception as an inner action, or will. It is therefore called active apperception.

We become conscious of the process of apperception chiefly through the sensation of tension which accompanies it, especially in a case of reflection, or a case of expectation. This leads us to the physiological processes connected with it. According to the thorough and most interesting investigations of Wundt, the following physiological func-

tions are to be distinguished in the apperception of an expected sense-impression: —

1. Transmission of the sensory excitation from the sense-organ to the brain.

2. Excitation of the sensory centers (at the moment of psychical reaction, entrance of the sensation into the field of vision of consciousness = perception).

3. Transmission of the sensory excitation to the apperception centers, *i. e.*, the fore part of the cerebrum; return of the excitation to the sensory-centers whereby a strengthening of the percept is caused, and to the region of voluntary muscles whereby a tension of certain muscles is occasioned (entrance of the percept into the focus of consciousness = apperception).

It is particularly this tension of muscles which in cases of intense apperception causes a feeling of exertion. When paying attention to outer sense-impressions a tension is noticed in the respective sense-organ (eye, ear). While trying to recollect certain memory-images, this feeling of tension recedes to those parts of the head surrounding the brain. In both cases it is a feeling of innervation of the muscles caused by a real tension, and is therefore accompanied by sensations of touch.

The theory of Wundt, sketched in the foregoing lines, expressly claims the merit of having proved the spontaneity of apperception, and having in opposition to Herbart, emphasized it anew. It connects with a thought of Leibnitz's and Kant's theory without elinging to it in its crude form. For while Leibnitz's "soul-monad" creates "*sua sponte*" its ideas independently of events and phenomena of the outer world; and while Kant's activity of apperception is only induced by outer and inner experience, but not determined in its contents, Wundt shows that the will appears in the pro-

cess of apperception in accordance with certain motives which determine its direction. He therefore asserts no absolute, but merely a relative spontaneity of the will. At any rate, all apperception is traced back to its spontaneous activity. Numerous facts seem to speak in favor of this supposition. In all cases where mental acquisition takes place only after surmounting special difficulties—since a thinking, lingering reflection and a wavering between different series of reproduction precede it—there the action of the will regulating, as it were, the course of perceptions, can be demonstrated. And the farther the intellectual development of man progresses, the more important becomes the function of those apperceptions that are brought about by the assistance, and under the guidance, of the will.

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EDUCATION.

"Thou that teachest another, teachest thou not thyself?"

FOR American Schools and American Scholarship there is no more healthful sign than the newly-awakened interest of teachers in all that pertains to successful work and personal culture. At the outset of this great and wide-spread movement in favor of better methods and worthier results, it was but natural that the practical side of education should be treated out of all proportion, while its theoretical and historical aspects should be somewhat overlooked. But if education is to become a science and teaching to be practised as an art, one means to this end is to gather and examine what has been done by those who have been engaged therein, and whose position and success have given them a right to be heard. Another and not less potent means is, to gain a clear comprehension of the psychological basis of the teacher's work, and a familiar acquaintance with the methods which rest upon correct psychological principles. As contributions of inestimable value to the history, the philosophy, and the practice of education, we take pleasure in calling the attention of teachers to our books on Education, mentioned in the following pages. It is our purpose to add from time to time such books as have contributed or may contribute so much toward the solution of educational problems as to make them indispensable to every true teacher's library.

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A Monograph on Psychology and Pedagogy. By Dr. KARL LANGE. Translated by the following named members of the Herbart Club: Elmer E. Brown, Charles De Garmo, Mrs. Eudora Hailmann, Florence Hall, George F. James, L. R. Klemm, Ossian H. Lang, Herman T. Lukens, Charles A. McMurry, Frank McMurry, Theo. B. Noss, Levi L. Seeley, Margaret K. Smith, and edited by Charles De Garmo, President of Swarthmore College. Cloth. 279 pages. Retail price, \$1.00.

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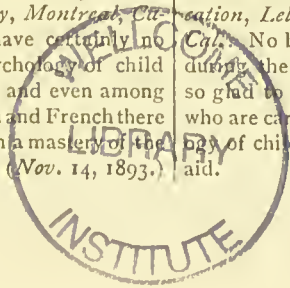
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